Argus700 Series 2.

FERRANTI Computer Systems

C\$03/25/070 🕕

NEWS IN BRIEF

Jamie for top tournament

JAMIE Gordon, the schoolboy whose chess career Computer Weekly is sponsoring, has been invited to take part in the Lloyds Bank Junior Tournament, August 20 to 28.

Thirteen-year-old Jamie was offered a place in the tournament on the strength of his performance in the London Evening Standard contest. where he won four of the six games he played. He is currently taking part in the British Open Championships in Brighton.

X25 software

SOFTWARE to support direct connection to X25 packet switched networks has been an-nounced for the NCR Comten 3600 range of communications processors, which are offered as direct alternatives to IBM's 370X SNA communications proces-

New divisions

THE motor trade oriented services company, Kalamazoo Business Systems of Northfield, Birmingham, has set up two new sales divisions, one to handle all its systems for the motor trade and the other to market Kalamazoo's K2000 and K250

DP for the masses

A NON-PROFIT educational corporation called the People's Computer Company is joining the Menio Park Library in a project designed to bring "computer literacy" to the whole of the 27,000 population of Menio Park in California by using the community centre, schools and volutiteer instructors volunteer instructors.

Are your DP plans being

frustrated by DEC's long

Bunzi Deta Systems offer you

and 11/70 based configurations.

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your 11/44 ??)

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delivery lead times?

Jobs for the girls after all . . . unemployment is likely to be very much less than has been forecast, according to a study carried out for the Equal Opportunities Commis-

The researchers, who had been looking into the significance of nicroelectronics for women's jobs. have decided that in the short term there will only be a reduction of 2% in copy typists' jobs, while in the longer term by around 1990 the effect will be somewhat greater. Case studies of 10 organisations were carried out by Dr Enima Bird,

EEC cash likely

consultancy Communications Studies and Planning. Where their results differed from previous forecasts was in the number of jobs

the promotion of standards in

general, and the smoothing out of regulations that obstruct

Money sought

Some way of funding innova-

trade within the EEC.

displaced by each word processor. While white collar union Apex has been assuming each machine displaced one person, Dr Bird and her colleagues found it took three machines to lead to the loss of one typist's job. This was because full productivity gains were only achieved in the relatively small number of cases where typing was organised very efficiently in a cen-

By 1990, Dr Bird expects

IBM realigns for office market

REFLECTING the growing interaction between the office and computer businesses, IBM is merging the development and the manufacturing units of its General Systems and Office Products groups in the US into a new information Systems Division. GSD and OPD sales forces will remain sensorate entities.

will remain separate entities.

IBM's vice-president, manufacturing, Robert Dunlop is to be president of the new division, which will have responsibility worldwide for development, including programming, and for manufacturing in

More often, word processors were being used to free secretaries to do other things. There had been no redundancies in the firms

On the basis of current sales trends, Dr Bird estimates there will be 64,000 WP keyboards installed in the UK in 1985. This indicates 21,000 jobs displaced, and these are typists' jobs, not secretaries'. A ough allowance has been made in these figures for growth in the volume of work done, but this may be an underestimation.

170,000 units to be installed, and with greater use expertise and better equipment, the displacement ratio may then approach i:1, she thinks.

Particular emphasis has been placed in the study on the nature of jobs in addition to their number. Of 51 word processor operators questioned, 36 said their jobs were more satisfying now than they had been with typewriters.

tion was also being sought. Dr Heimer explained, "Our members are jealous of Japanese government grants, which are given to whole industries." The US Small Business Act was cited as a problem; under this, 50% of the value of US government purchases have to go to small businesses. This would not necessarily work in Europe, Dr Helmer said, but the issue should be considered. Government purchases act in effect as hand-

Weekly that he found Davignon "very interested to get to know what is going on" in the industry and keen to help it fend off overseas competition.

Helmer of Dutch printer firm sloner were: Standardisation of Daisy Systems, told Computer government purchasing



for small DP firms

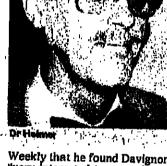
The association was set up by a group of suppliers of small computers, peripherals and software products to help make their views known to politicians. whose attention tends to be monopolised by the lobbyists of large firms (CW, April 17).

The President, Dr Antonius

are all hoped to flow from

Keen to help

Association.



Among the topics Dr Helmer was pressing with the Commis-

Davignon already has regular meetings with the heads of large European firms; his commitment to talk with the association is in addition to this. The next meeting is scheduled for Sep-

300-Mbyte drive for PDP and Vax

A 300 megabyte disc drive for PDP 11/70 and Vax 11/780 users has been announced by Digital Equipment in the US. It is also understood to be preparing a smaller Vax 11/580 for launch later this year and two more Vax machines are believed to be in the pipeline. The 300-megabyte drive, the 11/780.

almost doubling the previous biggest disc offered by DEC is called the RM05 and costs \$44,000 with controller or

\$34,000 as an add-on.

The drive is thought to come from Control Data, but DEC will say, merely that it is from an "outside source".

The Vax 11/580 is reported to be under test at a user site. It is a two-board system and DEC is also thought to have a single board version of the 32-bit processor under development, as well as a top-and model above June.

The Vax has turned into a

runaway winner for DEC since the company started selling the mini into the commercial market, Originally announced with very-little software, the Vax has been substantially enhanced in been substantially enhanced in this respect and companies writing business software for top end PDP-11s are adapting it to move their customers up to

The 32 bit mini was a

Software stralijacket

end IT were penicked into by the superior performance of the account of the accou

for the MP200 systems. Systems range from 10 disc through cartridge to Winchester storage.

Comma offer off the shelf delivery of complete.

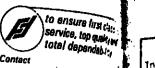
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Expansion Memories, Communications Options Interaces and comprehensive Operating Systems Software.

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UK teletexi standard

THE UK standard teletent on term used in the BBC's Code and the IBA's Oracle services has emerged as the class favourite for a US teletent standard. The UK system was more votes than the Free Antiope or Canadian Telede systems in the secret ballot d members of a committee stap by the Electronic Industria Association to decide on a

standard (CW, August 7). But a spokesman for the Federal Communications Commission, which has the find at on any standard, told Compute Weekly that the Commission was unlikely to set hard and list teletext standards, merely defining minimum stands covering things like http:

The spokesman for the Ca mission's broadcast bureausa that it was setting a treasure from over-regulation. "We'd rather let the market fighth on Some of our standards have been wrong in the past, such as when we set a colour TV stendard with signals which could not be accepted by the monochrome set.

One member of the EIA committee with a distinct preferant for Antiope is the CBS netupit.

Micro Nove Systems and DG Terminals

Date General Printers and Dasher Terminals site

COMPUTERS ID Branches in Birmingham, Bristol, London, Manchestel

Printed in Creat Britain by OB I Striffed, Steepen Place, County (1988) 14. And hubitaned by TPC Electrical Electronic Press (1988) 14. Denset House, Stanford Street, Landon, SE 1971



FERRANTI Computer Systems

Number 721

Thursday, August 28, 1980

SPOT THE DIFFERENCE...

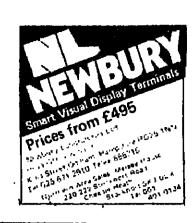
IBM frees 8775

to fight the 3270

Price 20p

변환보보면 그 그 그 그 **의 단 단 단** 한 시작보보면 그 그 그 그 **의 단 단 한** 한

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backing for UK nervous as word processing slumps in States

by Rory Johnston

MAJOR cutbacks in staff at two US word processing suppliers are raising fears that the recession is going to affect seriously this hitherto booming business. Several UK suppliers are finding sales considerably slower than a few months ago, but at the same time several companies report increased and several companies report increased in a few months. ago, but at the same time several companies report increased sales and little slacking in interest from customers.

Briefing

Prizes for programmers

YOUNG programmers can win \$400 for themselves and £1,000 worth of equipment for their school or college in a national competition organised by Bar-ckys Bank and the University of Kent with the idea of fostering British talent for good quality

Competitors have to design competitors have to design and write a computer program which has a practical application. There are two classes, under 16 and under 19, and the winning student in each category will get a Kent Software Trophy and the cash prize.

Closing date for entries is Paruary 28, 1981.

Aple floats

CAUGHT by a US Federal law which says that a company with the says that to go public, opple Computer has had to say a months. Sales at Apple are specied to exceed \$150 million the year and to double in 1981. It will \$25 million of stock is being affered by the underwriters, workers. of one of the largest US systems of "maximum separation"—
houses and bureaux, Systems that is, they do not compete provided that is, they do not compete unfairly by getting subsidies and

the European Infor-AUPA the European Inforation Providers Association tion
W. December 13:1979) is now ere
Imally constituted and has (C
Oppointed listhist chairman. He de
Prof Pierra Vinken, president by
the Dutch publishing com a
Bany, Risevier NDU. Sutipa to
members include publishers;
John database services and
detex operators.

painter include publishers:
SDC which had a nine-month tunioger of \$118,519,000 for the period up to March 1980, is best known for its specialist work in the computer based ambitious version of the newspaper system. A large and ambitious version of the newspaper system is being installed at the suggestion of the newspaper system. A large and ambitious version of the newspaper system is being installed at the suggestion of the newspaper system. It being installed at the Times in London and has been causing SDC considerable difficulties because of training the US communics. The US communics are used to the suggestion of the specialist of the US communics are used to the suggestion of the newspaper system. It being installed at the US communics are used to the suggestion of the newspaper system. It being installed at the US communics are used to the suggestion of the newspaper system. It being installed at the communication of the newspaper system. It being installed at the communication of the newspaper system is being installed at the communication of the newspaper system. It being installed at the communication of the newspaper system is being installed at the communication of the newspaper system. It being installed at the communication of the newspaper system is being installed at the communication of the newspaper system. It is not to a service and installed at the communication of the newspaper system. It is not to a service and installed at the communication of the newspaper system. It is not to a service and installed at the communication of the newspaper system. It is not to a service and installed at the newspaper system is being installed at the newspaper system. It is not the newspaper production and the newspaper system is being installed at the newspaper system. It is not the newspaper system in the newspaper system is being installed at the newspaper system.

Olivetti in the US is laying off 700 sales and marketing staff and closing down 15 of its 38 direct sales offices. month to sell what they would It is switching its emphasis to

selling through dealers, of which there are now 500, and this is move in a week a year ago. Consultant Keith Wharton, hoped to grow. It is understood however, reports a sharp increase in enquiries over the last two months, indicating that that the company has been making considerable losses in perhaps in six months' time these same customers will start AM Jacquard has announced

the trimming of 110 staff in all placing orders with suppliers. departments in the US, 15% of its Some customers are being encouraged in their plans to buy workforce in anticipation of what the company calls word processors by the need to "recessionary pressures in the months ahead." President Edgar increase efficiency to get by with fewer staff. This is the experience of Eric Jones of Data Recall, whose staff has shrunk from 130 to 110 since February Bolton has resigned to pursue other business interests and has been replaced by George Vosatks, formerly of the Tymby wastage, but who is expec-ting sales of £3.8 million for the current half year compared with £1.7 million for the same period

Comfortable

Jacquard's cutbacks follow the closing down of its UK direct sales network (CW, June 12). Nevertheless, David Lee of Jacquard UK affirms that the company here is getting "a comfort able amount of business" now. Other suppliers in the UK are getting noticeably fewer en-

giving the Detroit-based

nanufacturer a broadly-based

manufacturer a broadly-pased software development development capability and a services operation to compete with those offered by Control Data and IBM (CW, August 21). Under the deal, which has to be approved by SDC's shareholders Burroughs will pay \$69 a share, a total of \$68 million.

SDC, which had a nine-month

Adapso warns on

Burroughs \$98m buy

Price of a word USERS who want to add their own personal words to the standard 373 word set offered with Texas Instruments' voice synthesis products can get the company to do it for them — at a state. To mid one extra where in

IBM has also announced that the SDLC loop, used for con-necting 3600, 3640, 3650 and 3660 SNA function terminals to their controllers — and for attaching 8775s to 8100s — is now available on the 4331.

The 4331 Includes an Integral 3705 processor for running the SNA Network Control Program. and the availability of the loop adaptor means that the 4331 could be used to support 3600 banking terminals in a one branch bank, or as an in store computer supporting 3650 chain store on 3660 superfusivet pain organization in 1868.

terminal, announced with the

8100 remote processing system (CW, October 12, 1978) is now

offered with SDLC support as an alternative to 3270s on IBM 370,

303X and 4300 series machines.

Divided The 8775 is driven by

and software combined and has a larger which can be the trend in the business now.

The trend in the business now.

Dreyer said; was to look at in control into up to eight separately addressable geotors.

Once allocated to a sector, the

INSIDE THIS WEEK'S CW....

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LOB OPPORTUNITIES: PAGES: 17-8

Tory MP क्ष क्ष क्ष क्ष क्ष क्ष क्ष क्ष **क्ष क्ष क्ष क्ष क्ष क्ष** क्ष क्ष backs ECR import controls

IMPORT controls on electronic cash registers imported from Japan are being demanded by the unions involved with Chubb Cash, the Brighton-based ECR builder where staff are on short

The Conservative MP for Brighton Kemptown, Andrew Bowden, has promised the unions that he will put pressure on Trade Secretary John Nott to stop the import flood of

But Chubb Cash sales director mes Anderson told Computer Weekly that the new rodosigned low cost ECRs promised two years ago (CW, July 6, 1978) would be launched "within the next couple of months" and thatthey would be built at Brighton.

Chris Darke, national organ-iser of TASS, the white collar worker section of the Amalgamated Union of Engineering Vorkers, said he was shocked that a decision to close the Brighton plant appeared to have been made despite assurances by management that no state-ment would be made without

prior consultation with workers. The Brighton operation was taken over by Chubb in late 1976 from Gross Cash Registers and renamed Chubb Cash at a time when it had already been in severe financial difficulties for several years. In 1977, 420 people were made redundant;:

VSE, CICS/DOS/VS and ACF. According to James Anderson VTAME. A down-line load the new ECRs will be a develop-utility for VSE has also been ment of the existing range but sinnounced. will incorporate a lot of changes.

New from Cifer... ... the 2684 Urer Programmable Terminal

ntroducing the Cifer 2684 User programmable terminal at the top and of the 2600 range of compatible VDU's; The 2684 prov full 64K bytes of user RAM, supporting industry Standard operating system with in built 260K byte floopy disc drive. In addition to the disc processor system

a separate VDU processor provides all the features of the 2632 termina which sets as a 'front and' processor

Dual Z80 processors. Single and Double Density Disc

sector, and wraps text around at

the sector boundary. The VDU has also been enhanced with a

scrolling feature, and is

ergonomically more attractive

The loop adaptor for the 4331 is supported only under DOS/ VSE, CICS/DOS/VS and ACF/

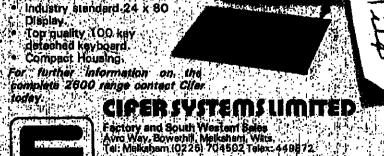
than the 3270.

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US launch of teletext

CBS backs French

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means of generating Cobol programs for the nutrial type of business applications. Where is the gam petition between atthems of supercooling to the conject and colings applications. Where is the gam petition between atthems of supercooling to the conject and of supercooling to the bame of a similar product for 1900 tipe anytroinment.

MET might browned to Cobra bill. Without

ROVERNMENT COMPUTER REQUIREMENTS

COMPUTERVIEW

THE loss, now almost certain, of a major electronic and communications equipment contract in frag to France highlights one area where even non-interventionist governments cannot afford not to get involved. Plessey complains that award of the contract to

Thomson-CSF of France will be as a result of the French overnment giving Thomson better financial backing for the deal than the UK could offer. The rights and wrongs of the case are not clear cut

because buying jobs wholesale by taking a loss on export contracts — as with the deal to build ships for Poland — is a shortsighted way of doing business.

It does seem clear, however, that where high technology industries of the future, like computers and electronics, are involved, it is incontrovertible that British companies must get their full share, even if it means that we have to start playing the game the French way rather

An example of the kinds of thing which may be necessary is Univac's decision to install an 1100/10 mainframe in Peking at its own expense in order to train Chinese engineers and programmers not just in US computer techniques, but in specific Univac techniques. The thinking mirrors that of the Jesuits' "Give me a child until the age of seven and he's mine for life." Once trained, Univac hopes that the Chinese personnel will put Univac top of their personal list when specifying

Univac needs to do it in part to break down an entrenched pro-IBM bias in China.

LETTERS to the EDITOR

a decision on PAYE

the country, and I can't really

see what use it is to the govern-

The age of the enormous, de-

dicated computer is surely over, except for genuine number-

orunching activities. Where there is no need for vast stores of

centralised records, a more

modest, localised access to com-

puting power is far more appro-

priate. It is, incidentally, far less

prone to vast over-run in time

and money, natural disaster, in-

The government should now

The Automobile Association

Claire Gooding points out that

the claim concerning MEL and DDS was in quotation marks, and aftributed to

Melvyn Morris, co-author of

MEL. She doesn't necessarily believe everything she quotes, and recommends that her

readers don't either

Commercia Aventry is always in the second of the second of

Basingstoke

dustrial action and so on,

Govt right to defer

WHILE I am not a supporter vantage in having my records of the present government in available, online, anywhere in

idvantages!
I can see absolutely no ad-put out to tender for the supply

READ with interest Claire 2900 VME version, it doesn't

Gooding's article about Forward compete with SuperCobol and in

Computing's Macro Expansion no way does it provide the facilianguage (CW, August, 14) and itles of DDS.

In the facilian of the article; ICL's Data Dictionary System and Dataskil's Super-Cobol are competing with one another.

Compete with SuperCobol and in no way does it provide the facilian no way does it provide th

that it is right in deferring a

decision on the PAYE system, and in suggesting that a "small

muchine" approach should be

As you said in a front page article on the subject (CW, August 8) "the one big advan-

lage of the national network

approach would have been

online access to records any-

where in the country relating to

any individual." With advan-

tages like that, who needs dis-

another. Come off it, Claire My com-

pany is already using the ICL DDS and is currently evaluating SuperCobol: DDS is a means of

computerising data and systems

analysis documentation which, as a by product, allows one to generate Cobol data definitions. Super Cobol provides a fast means of generating Cobol pro-

Just like the average company chairman, the Chinese know that IBM is very big, very successful and very now for Export Credit Guarantee funds, which are taken profitable. Biggest equates with best in their minds, and up to finance future exports. ECG loans bypass our high

Time to get

so when a project financed by the United Nations Development Programme came up last year, the Chinese had already made up their minds they wanted IBM, and had to be cajoled into even looking at the

offerings of other companies.

The problem is that without substantial government backing no European computer company is likely to be able to afford to take such a substantial risk as Univac is taking in China, given that country's history of violent nd regular political U-turns.

The French government fully recognises this. It is much less clear that the British government does.

All round the world, British and French missions are wooing likely national government prospects. The British seem to be ahead of the field in Mexico, it looks like level-pegging in Greece, while in Argentina and China the French appear to have a clear and substantial

The one cheering piece of news on the economic front is that despite all the woe from the Cassandras about the strength of sterling killing Britain's export trade, the export figures for the last three months have stubbornly relused to fall — and there is enormous demand right

British firms, not just ICL to get

It should then select half a

dozen of these for a trial period

in guinea-pig tax offices, and

allow them within a broad specification of their require-

ments, to develop their own

A final choice of the complete

contract could then be made on

a basis of considerable con-

fidence that the best solution

SINCE South African political policies are becoming a bit of a long-running serial in your

letters column, could Computer Weekly not widen the whole

subject by introducing comment on Russian policies in its subjugated territories of Czechoslovskis, East Germany, Hungary and Poland?

And don't let any of your

readers fool you by pointing out that Russia supports the black races; it has sound political

races; it has sound political reason for so doing, of course, in somebody else's Continent!

Apartheid merely means segregation of and by implication, unfair discrimination between races. Colour dossn't come into it.

DEREK BRADLEY Sanderstead, South Croydon.

DELIA VENABLES

in on the act.

interest rates for exports outside the Common No. since they are both subsidised (currently costing, 84%) and guaranteed by the government her demand reflects export contracts to come through

The question is whether this level of government to high technique. orders, orders which frequently involve poly enormous follow-on business, and can establish cular company as the principal supplier to thater

Certainly the havering over whether or not to gware Inland Revenue contract to ICL is the kind of beautiful. exports that no British company needs. The improcustomers are those in the Third World who will be anything which has not got a fulsome government of approval at home.

Excluding oil, Britain still exports a substant higher proportion of its output than any of its accompetitors, including West Germany, Japan, bei

British companies like ICL and Racal ste's covering" Europe, a market largely neglected when was so much easier to sell to the US and the largely speaking former colonies. And sterling has so the dramatically against major continental currents at the second seco there is no "strong pound" excuse for failure lend led by ICL, the high technology companies are be ning to succeed in continental Europe.

With a little more intelligent and creative help be their friends in government, they could do much has right round the globe.

Report—Page five.

First model in **Burroughs**' **B900 family**

BURROUGHS has filled the gaping hole between its new B90 and B1900 small business computers with the first model in a

dden Itel is threatening residual values of the equin-

ment in the case of early ter-

IBM 370s hit by sales of the

303X and 4300 series, Itel's

claims on Lloyd's without a

settlement could amount to

\$200 million over the next few

The settlement will probably

reduce Lloyd's total pay out

significantly, but if Itel goes

bankrupt before the deal is

writers could get out of having

concluded Lloyd's under-

years — if Itel survives.

mination. With the values of

Lloyd's underwriters with

itigation if the settlement they

have been discussing since

early this year (CW, January 24) is not concluded soon.

Under the deal, Lloyd's is

upposed to take over the

marketing of Itel's lease base

IBM 370s and assume res-

consibility for Itel's debts to he banks which financed the

In return, Itel will pay

Lloyd's up to \$100 million so

the debts will be effectively

The leases are covered by

lit between the two sides.

now famous Lloyd's "J"

At present announced only in the US, the B920 is a multiple processor machine with an architecture which looks similar to that of Honeywell's new DPS 4 (CW. June 12). Thought to be similar to of Honeywell's new DPS 4 (CW, June 12). Thought to be similar to that used in the CP9400 and 9500 communications processors, the B900 family uses processors dedicated to system control, compilation and execution, file handling and communications.

DOING its small bit to slieviste the gloom over receding employment prospects in South Wales, Ferranti

arriyes

NEW form of data storage device called the "stringy Roppy" is now available in the UK from MBS Terminals of Byffeet, Surrey.

it works like a magnetic tape carvidge drive but is far more compact than either a cartridge unit or floppy disc drive. It is far ister than a cassette unit while costing less than £200.

The stringy floppy is already wallable for use with the Tandy TRS-80 microcomputer and versions for Pet and Apple machines will be here by

li takes the form of a minia-Are cartridge about the size of a hishess card and only 3/16 in. nside is a continuous loon. which can hold up to 80,000 as and store data at a rate of

The B920 has five processors two are dedicated to actual computation, one runs the operating system, and there is one file processor — effectively à disc controller with substantial intelligence. The fifth is a communications control processor. Two further "task" or computation processors and one further communications processor can Each processor has its own

main memory with the minimum configuration, costing \$60,500 in the US, allocating 256K-bytes to the operating system processor, 64K-bytes for the file handler, 128K-bytes each for the task processors and 64Kbytes for the communications If the CMS Computer

Management System operating software has been used, there is complete transferability of programs from the B80-800-1800 to the B90-900-1900 family — pro-vided of course that the machine to which it is used has adequate capacity for the software.

Languages supported on the B920 are Copoliand RPG II.

Itel's losses for its 1979 financial year have yet to be published but are expected to come to a frightening \$430 million. The San Francisco leasing company is still trying to negotiate the restructuring of its large debts with its bankers.

Meanwhile, Lloyd's underwriters have negotiated an un-usual settlement with Commonwealth Leasing of Florida. Under the deal, they will pay Commonwealth about \$10 million as a "full and final settlement" of its claims.

Lloyd's has already admitted The Commonwealth deal is that underwriters could be

Itel presses Lloyd's for quick settlement

are being paid out on a regula month-by-month basis ove several years and make up the difference between the actual receiving from the lessee and

the rental figure originally

Thousands of these pay ments are now being made each month on behalf of Lloyd's by First National Bank

Lloyd's still has to face the \$630 million law suit started ast year by Federal Leasing of McLean, Virginia, which was the result of underwriters not paying some Federal claims.

> inglish and French systems in engineering inhoratories for

French win the day

system for

NOW that broadcasting giant

CBS has entered the teletext

ring, it looks as if the system of broadcasting text to domestic

TV sets is ready to take off in the

the past 18 months.

org, transmitted at a rate of 5.72 megabits per second, as the

CBS engineers say that Anti-ope is more flexible and versatile than the UK systems.

Problem is that while the "There are those who say tha Electronics Industry Associa-tion is going for the UK Ceefax. Oracle standard, CBS is backing Antiope is more complicated than the British systems," says Antiope (CW, August 14). The ElA vote for the UK system was one CBS executive, "and for the short term, they are correct. The Antiope decoder needs a bit not conclusive either, and CBS more memory. But we feel confident that Antiope will excel in could still ensure that the

the long run."
CBS adds that Antiope is de CBS has been testing both the signed in such a way that addition of functions to allow viewers to interact with data on

As a result of these tests, CBS the screen would be easy.

AT&T reshapes for move into services market

operations to prepare for its entry into the computer services

A new company, AT&T inmarket has been announced by US telephones giant AT&T. It has separated its business

into two divisions, one of which will offer all services and equipment which have been released from Federal Communications The plant currently employs 565 people and should grow to 1,000 before the end of the decade.

The picture shows the de Per-Commission regulation.
The other will continue to

provide standard telephone service to the vast majority of US ranti brothers, Basil and Sebastian either side of the development subscribers.

To complete the reorganisa-

A REORGANISATION of its does not already own in four of ternational, is also being formed

> to handle all its overseas opera-AT&T is moving back into the

international market, having lost its overseas operations in

'YDUs are safe'

TESTS carried out at the Toronto Star newspaper in tion, AT&T is buying the stock it no harmful effects on users.

'Micro shop undercutting dealers' row

systems at the New Barnet computer store, Compshop, is causing a row with both UK distributors, Commodore UK

Computer Systems has sited a de-sign, development and research

unit at Ty Coch, Cwmbran. The yet

to be completed centre has produced its first product, an Argus

M700 development system for use in testing and analysis of the

and Microsense. They accuse Compshop, non-authorised dealer, undercutting their dealers and leading potential users astray by selling US models direct and not providing a sufficient support service.

Compshop was involved in another row earlier this year with Clive Sinciair when it marketed a cheaper copy of the ZX80, called MicroAce. This resulted in Compshop obtaining US marketing rights for its sys-tem in kit form and Sinclair getting 5% royalty on all sales (CW June 12).
According to managing direct

tor Chris Cary, Compshop offers Wites and store data at a rate of First US shipments are set for tor Chris Cary, Compshop offers the stringy floopy can plug claimed to offer between two to Microsense's three months; a stringy floopy can plug claimed to offer between two to Microsense's three months; a stringy floopy can plug claimed to offer between two to Microsense's three months; a stringy floopy can plug claimed to offer between two to Microsense's three months; a stringy floopy can plug claimed to offer between two to Microsense's three months; a stringy floopy can plug claimed to offer between two to Microsense's three months; a stringy floopy can plug claimed to offer between two to Microsense's three months; a stringy floopy can plug claimed to offer between two to Microsense's three months; a stringy floopy can plug claimed to offer between two to Microsense's three months; a stringy floopy can plug claimed to offer between two to Microsense's three months; a stringy floopy can plug claimed to offer between two to Microsense's three months; a stringy floopy can plug claimed to offer between two to Microsense's three months; a stringy floopy can plug claimed to offer between two to Microsense's three months; a stringy floopy can plug claimed to offer between two to Microsense's three months; a stringy floor three months are stringy floor three months and the months are stringy floor three months mance than B800 machines vice compared to one costing

the user £105 annually for each system; and degree engineers to provide service rather than

system. On the right is N. D. Pen-

Nevertheless, Compshop is successfully carrying out its business selling Apples and Pets imported from the US, says Cary. He would not reveal his sources, but did point out that Compshop is an Apple dealer in

It is this good business that is causing the problems. Steve Brewer, a director of Microsense, says that the price undercutting, which Compshop is able to do because units are cheaper in the US, is taking business from the US, is taking business from its authorised "We have had dealers com-

plaining to us about a certain computer shop in New Barnet,"
he told Computer Weekly,
Brewer is issuing a warning to
potential Apple users not to buy
"rogus" Apple at this discount

price (about £100 less),

These "rogue" Apples, he claims, are "not Europlus models" and are therefore incompatible with the UK mains supply and televisions.

"Not so," said Kevin Hawkins, an engineer at Compshop. "We

sion has an autotransformer ready fitted and comprises a printed circuit board which ered from 60-50Hz with a single sell a new revised version of the Apple 11 Europlus model which white television.

'First' claim for CMG mini

connection change. It can also be operated with UK black and

has autostart ROM and Apple-soft in ROM," he said. This ver-

WHAT is claimed to be the first public sector and insurance stand-alone interactive investigations.

stand-alone interactive invests, possessed and instrained ment portfolio management companies currently running system is now being sold by portfolio management on their company smainframe or ment Group. Called Invest 3, It on a bureau like CMG.

runs on Computer Automation's Firms with manual systems

commercial and user system could also be interested because Syfa and was developed in the complete hardware house by the Provincial Insu-software package costs about mace Co.

Invest 3 is based on the invest Potential Eustomers for Invest 1, 2 batch portfolio management 3 are mainly pension fund service that CMO runs for four operators particularly in the insurance companies.

RING Brospa Data FOR Qume PRINTERS READING **589393**

GOVERNMENT COMPUTER REQUIREMENTS

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which are representative of the top and of the market less than £13.060); to install a point of the top and of the market less than £13.060); to install a point of the top and of the market less than £13.060); to install a point of the second of the seco

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War allar.

CONTRIBUTIONS from readers are welcome for our cellum of the graph things people think and say about computers, we will pay 25 prepare things people think and say about computers, we will pay 25 prepare the publish.

By reader, references in the point office globals being dither willed the same that the propare the propared the propared of the propared that the propagation of the part of of the par

TOPS door ajar to older trainees of a suitably "devolved". I am glad to learn from Brian graduate mothers. On The

minicomputer network, which would allow quite a number of Patterson's letter (CW, July 31) that there is at least one TOPS other an American count course-running organisation where people over 35 are not regarded as too old to learn pro-

You will be interested to know that my earlier letter (CW, July they are ajar)

3) brought favourable replies from two employers, both of whom are actively looking for Manchester

letter says, the doors are say closed to older trainess; shall re

National Computing Contro

British mail order house tells

manufacturer (no, not that of

So, as your headline to Bout

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Qune



by Chad

Genial wisdom

GENE Amdahl, starting out on vet another venture aimed at conquering the world and especially IBM, is certainly doing nothing to dispel the reputation computer people have for obfuscation. He describes his new enterprise as having "an orientation much more towards what'l think is optimal for the future."

He seems in some confusion over his financial status. He told the Financial Times, "I didn't have much stock in Amdahl," while to the Wall Street Journal he said his holdings were "pretty good sized." satlantic difference in language here, or could there be a sinister political significance?

I was talking to a friend of his a few years ago, who related Gene's quandury over was founding. "No question about it, Gene," the friend told him. "You've got to call it the Amdabl Corporation, That revolution there's no way they can fire you."

paranola was redundent, as Gene left through ill-health.

some black employees of IBM have been holding demonstrations in front of the company's offices, complaining that they are being discriminated against. This has caused great puzzlement to the New York police, who could not understund how these people in sombre suits and ties could be demonstrators!

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In the event the friend's

Sombre note

putting to the TUC in Brighton. To help the unem-I HEAR from New York that ployed, we should all take an hour off work on Friday afternoon without permission. This would force employers to take on more staff to get the work is there anything about this notion that bothers you? When was the last time you tried to

own dynamic industry) to do anything on a Friday after-TASS News and Journal: "In-land Revenue should buy ICL". Great idea! ICL is making noon? It can't have occurred to TASS that most people take an hour off on Friday afternoons plenty of profit these days. If it already. If they take another all went to the Treasury we the bosses still won't be there would all have to pay less tax, to notice. If ever I see right? I fear the proposal will manager being worried about a get little sympathy from Mag-gic and Sir Keith, though, despite their longing to reduce I shall die of shock. taxes. They could hardly accept a plan from such a

source, could they? Not In-

vented Here works in govern-

get someone (outside your

taught as a subject to designers

Of the 42 signed contributions.

readers of this column will

recognise five of my Mythodo-logies on maintainability, others being contributed by such well-

known names in the field as

Barry Boehm, Gerald Weinberg,

Edward Yourdon and Glen

Myers. What new insights do they bring to the old problems of

Daniel Freedman and Gerald

Weinberg discuss "Maintenance

reviews and management" (they

wrote a whole book on reviews

and Inspections available from

the same publisher). Ask yourself the following question: Do all

program and system changes go

through a formal review process

which is as stringent as Fagan's IBM Inspection? If not, I suspect

that you are paying far more than it would cost you to do such inspections. Freedman and

Weinberg argue for a separation

of production (development)

and maintenance reviews. The

same authors, in another article,

give a checklist for potential side-effects of a maintenance

Stephen Steams of Bell Labs

shares his experiences in "Cen-

tralised maintenance of a large

application system" (200 online and 300 batch Cobol programs).

He introduces a Severity Code (I = iotal digruphing, while is in inimor, problems) for giving

priority to maintenance requi-

material from this book.

programmers, using

TASS has another idea it is

TASS plan to aid

the unemployed



"You forgot to leave the dirty fingerprints on the screen, 'metal"

iT had to happen finally — a whole book on program maintenance! Who knows? Maybe

Source-book on

program

new bugs during program

changes, which are introduced

in order to allow increased

The resulting evil circle is diffi-

cult to control but "increased

testing of new releases" is sugg-

Other authors would have

recommended changing Inspec-tion, and perhaps Bell would

ioday, but the paper refers to experiences at Bell predating its

own use of the Inspection

A.R. Brown and W.A. Samp-

son present what they call The

Method as a problem-solving

technique in program debugging and maintenance: Briefly, it tries

to gather information in sharp

"is/is not" categories. This is

compared to giving a blood-

hound a sniff at the robber's cap: it gives a better trail to fol-low. The idea looks interesting

and surely it must, if applied, aid the unorganised mind. It is a shame that no experimental evidence is given for the effect of

this method compared with

other approaches. Certainly

here is a small challenge for the computer science student

looking for some useful research

into error perception techno-

The condept of "high runner" here into a single procedural here into a single procedural here into a single procedural handbook of non-conflicting ponsible for 28% of the mainter what something where I could say "Follow this and things will as because of the introduction of set much better"

TEN YEARS AGO

ested as a medicine.

olume of use of the program.

maintenance

GILB'S MYTHODOLOGY

FOCUS

Time to help the disabled

often suggested, is one where free enterprise flourishes, cutthroat competition stalks and few holds are barred. The successful companies strike-it rich and go to the top end of the charts while the others miss several turns or go to the DP

But it is becoming necessary for the industry to take some regard for the world around them. There should be rather more to computing activities than establishing record order books and associated balance sheets. Alongside the competitive thrust of the vendors, users and professional DP teams, there exists room for curing ills and redressing some of the more human problems of

There can be few more human

May I humbly suggest that your methods department be

provided with a copy of this with

the assignment of trying to distil

some specific new ideas for

improvement of present prac-

You could form an internal

study group with the objective of reading and discussing the

book, both with a view towards

the participants' further training

and development, and towards

the hope that some of the ideas

night bounce off into practical

*Techniques of Program and System Maintenance, edited by G. Parikh. 289 pages. \$25. Ethnotech Inc, Box 6627. Lincoln, New England, USA-88508. ISBN 0-933950-58-6, 1980

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my longer, write.

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erminal Display Systems Ltd

Fortunately not all part the industry establish the problem with indiffer the problem with indifferent ich notably sponsors a confor the disabled at the Elizabeth College. Compared Weekly itself donates the ceeds of the Annual Ballent BCS. Specialist Group for a Disabled.

But other support is The NCC appears to make allowance for the diale George Penney, who are a minds the Threshold cape ment scheme, makes no of the handicapped in his wise excellent book, A Com-

Society is concerned with activities in promoting the of the disabled are probable tification alone for its exists Next year has been des

the International Yeard list

group for the disabled bliss

with Dr. Adrian Slo

chairman of the IYDP Te

logy group on several proje

Helping the disabled with could well, of course, have to

implications. The district general will, I hope, benefit a such industry-inspired deter

ments as specially designs

invalid carriages. The country

abled are more than a lead

behind the rest of the flet's need special help if they are to slip even further behind.

So what is to be done? In major computer organisms whether manufacturers, and

pliers, consultants, busing recruitment agencies can all first place contribute fund.

more than mere money by

There can be few large of companies which cannot say

industry is famed for still !

typewriters and emp household controls as a s

led People. The BCS speins

installations YES, the volcano in our picture is the notorious Mount St Helens and, according to US publication Business Week, it is playing havoc with many computer installations in the Pacific North-West of the US.

Yolcano slows

Ash fall-out is the real cause of the trouble according to tales of we related to Business Week by local computer users. It is clog-ging air filters, wrecking the surfaces of disc platters and even penetrating the protective covers on floppy discs. Firms outside the computer

industry are also in trouble with Camation Fdods having to close down its French fry plants in Washington State due to ash contamination.

The final will be held at the New Alexander Stadium, Perry Bar, Birmingham on Saturday, Sentember 13 It starts at 10 am

A bar has been confirmed and

are to be awarded to Computastars competitors.

RING Brospa Data LOS MESSE PRINT READING **589393**

Univac aims at toe-hold in China

now emerged as a front-runner with plans to install its own 1100/10 mainframe in Peking and provide training in computer engineering, programming, operations and usage.

The move is seen as an attempt to pre-empt its rivals, led by France and Japan, by educating a generation of Chinese computer professionals on its own hardware in the hope the Chinese, because the political direction of the country is subject to violent fluctuations, and companies caught out by the Iranian revolution could hit that they will subsequently put Univac first on their list when looking for new hardware. Oil platform

Training

Univac is installing the mainframe and providing initial staffing at its own expense, but will be paid for the training that it provides. Its agreement is with the China State Administration

INDUSTRIAL automation

specialist, Westcode Systems,

has won a £1.1 million contract

for a centralised monitoring

Wesdac, Westcode's hard-

of the Computer Industry.
Univac aiready has four 1100/
10s approved by CoCom, the
free world body which vets high system to be installed on a multi-purpose production plut-form in the Magnus Field of the technology sales to Communist countries — and they are already installed in China. The ware and software package, will link with three PDP-11/70 sysfifth is therefore unlikely to pretems and provide real time monitoring facilities.

sent approval problems.
Ambitious projects proposed by the French government and computer industry have been discussed with the Chinese government, involving estaolishment of computer manufacturing plants in China. As yet, these have not come to

A substantial risk is involved

Japanese aid

ALTHOUGH IBM is supplying 15 regional and one central computer for China's census next year (CW, June 12), the Japanese government is to provide software apacialists to work on the project. The hardware, procured by the UN, includes one 4341, and 15 4331s.

Children's art competition at Computastars finals

SAFE Computing is to sponsor organ art competition for spectalors' and comnetitors' children Olympics, Computastars 80. able. Called Computartists, it will be O

Judged in two groups: Under 10s and Over 10s. Computer Weekly accused of inertia tr support still. Let us hope they it is the action mode in respectable. editor Simon Timm will be one

Splember 13. It starts at 10 am and admission is £1 for adults

at the finals of DP's own well as food will also be avail-Over £3,000 worth of prizes

Computastars is sponsored by

Computastars ticket coupon, we ind 60p for children. Tickets are ilnadvertently gave the wrong



us, 1178 High Street, Croydon, CR0 1QG.

Adult ticket(e) at £1.

Child ticket(e) at £0 (under 14)

Quality of the Computatars 80 Competition at the New sender Stadium: Perry Bar, Birmingham, on Saturday, made payable to Compu-

MARPENCLOSE A STAMPED, SELF-ADDRESSED ENVELOPE



New UK chief for Burroughs

managing director of Burhis career with Burroughs in roughs, Bob Akors is retur-1952 at the company's ning to the US to become iaham branch, in 1962 corporate director of marhe joined Burroughs UK koting operations at Datroit headquarter's staff and in headquarters. Taking over 1970 hecame UK sales deve from Akers is Laurie Rushton (pictured left) a Briton who has been regional manager in charge of Burroughs operations in Northern Europe

Hø was general manager of the Burroughs company in South Africa from 1972 to

US bureau to get first B5900s

FIRST of the new Burroughs B5900 mainframes are going to where (CW, August 14). US time sharing bureau Data Resources Inc. according to US paper Electronic News.

The B5900s will slot in at the bottom of Burroughs' large-scale mainframe line and are not

big US bureaux like ADP and also been converting some of its National CSS in offering its proprietary software on hardware Equipment's Vax-11:780 32-bit

Electrical wholesaler picks NCR for network installed at installations from Newcastle to Birmingham.

It is thought that Data However, Electronic News

Resources plans to follow other says that Data Resources has

WHOLESALE electrical distributor the Sellers Group is to speed up its order processing system with a network based on eight NCR machines. Replacing a batch order sys-

customer inquiries about outtem based on a DEC PDP-11, the standing orders and stock levels. three NCR 1-8270s and five I-Central files will be updated at 8251s, valued at £400,000, will be the end of each working day

Terminals will be placed at the group's 16 warehouses, enabling

Information such as new accounts, new products, price status will be relayed down the line to local systems at the start of each working day

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y weether dir Coughout,

Anideal apportunity for Educational **Establishments** to aquire a powerful PDP11 Timesharing Systematunrepeatable mrices. PDP 11/35 with 256 kb MOS memory console interface with real-time clock: 2-off 40 mb disk drives and controller (RP03/RP11 compatible); 1-off console VDU RSTS Licence V7. Three systems only available at £12,750

Further plans include a ver-sion for the Digital Equipment Vax machine, and mainframe

versions for IBM 370 and

Basic is aircady supported, and compilers for portable Pascal and Ansi 77 Fortran are

on the way. Mark Williams' president Bob Swartz described Coherent as "a

state of the art operating system

whose design uses the techno-

our own, starting from scratch"

It's a total implementation of

Unix micro version

by Claire Gooding

PAGE SIX

for programmers and analysts

Filling jobs from untapped sources

short-staffed. We have all read of the urgent need for skilled people to do programming and analysis work. We also know that trainees do not fit the bill, even if they have put in their time doing a TOPS or any other kind of course.

Industry needs people quickly with certain specific skills. hose who have been trained in Cobol or Basic may be very good and probably think that they are competent programmers, but employers don't want to spend time and money "untraining" these people and teaching them the skills required to do the work

So where do they go? A recent US report draws attention to companies over there who are experimenting in recruitment. They are taking staff from previously untapped sources; something the UK's Manpower Services Commission urges us to do in this country if we are to solve the great computer staff shortage.

Strangely enough, the groups of people that the US companies recruited from are those we have already looked at on this page, and asked why they were not given a greater chance. They include the disabled,

part-time workers and the housebound. The Wells Fargo Bank in California has 35 disabled staff working in its DP

operations.

Most of these employees are severely disabled; that is blind, montally retarded, deaf, autistic and those suffering from severe

Success

The bank claims that its recruitment policy has been a great success, to the extent that other employees of the bank have started taking sign langu-

All employees have a career path mapped out for them when livey start, so they don't fall into a "dead end" job, as do many isabled people once they have lound employment.

been the policy of the bank for seven years and it maintains that the staff are industrious. efficient, loyal, and good work-

US is that of taking trainces from school rather than university. The problem of being undertrained is nowhere near as great as if they were trained in appropriate skills.

Potentially, school leavers who have studied some computer science and programming at school have the backgroun and usually the interest to make good DP staff.

This group, of course, is taken on with the eye to the future and cannot solve immediate shortages. A number of people however particularly women but also house-bound men or one-parent families of either sex_are fully trained programmers but are simply unable to leave the house for long periods.

Several working arrangements can be conceived to lap this valuable resource of talent,

become a standard joke these

days. Bureaucratic, petty, slow inefficient ... most of these de-

scriptions are rather hackneyed,

as is the continual complaint

against filling in forms, usually

associated with the Civil Ser-

be done by them.

site but with flexible hours. A housewife might want to work only during those hours

when her children are at school, or when they can be looked after Alternatively she may, because of smaller children, be unable to leave the house at all

In this case she could be supplied

Convenient

F International, founded by Mrs Steve Shirley, has been using these people for some years in a very successful and lighly regarded company.

There are many occasions leave work for some reason. Surely they could continue to do some useful work at home, or even put in a few hours a week on-site at mutually convenient

For this kind of work, employment is generally contracted on a project basis rather

How 'red tape' hampers Civil

Mrs Steve Shirley of F International has been successfully using

than a work-hour basis, which makes it easy for someone who has other commitments to fit the

These are just three specific groups of people who could make the staffing problem a little lighter. The trouble seems to lie with the employer, not the

In many cases he is frightened of taking on staff through unconventional means and continues to advertise and look for the stereotyped programmer with three years' experience.

When are employers going to wake up to the situation and realise that if they do want a job done, they will have to widen their horizons, or not get it done

The DDS User Group has published a report of its proceedings, and this opens with a list of 54 actions it wants ICL to take on DDS, among them the call for support on the older ICL hardware. It says that by the end of last year, 12 had been imple-

mented or acted upon.

The report highlights the value of DDS as a conversion aid, and says that users and potential users should be made aware of this benefit.

"The dictionary can be used to monitor a conversion exercise and to document the changes

*Using the ICL data diclease edited by A. T. Windsor, 18 p. 08 (£18 airmail). Shiva Publishes 18 (CW), 9 Clareville Road, Only 18 BR5 1RU. Two more evaluation tools

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SOFTWARE FILE

of user demands

THE problems that ICL faces made during the exercise, with demand for new software says. "At the end of a content."

from users of its older products has surfaced again, this time in connection with the Data Dic-

outlined in the report, and the

serves as a useful base for from

The report contains a way

of valuable user experience

DDS, including case stade

Crisp Inventory Control projet and at West Midland Gu w

West Midlands Gas is parte

larly enthusiastic in its con

sions: "We found that the Di

offers an excellent basis is

storage and retrieval of coa

documentation. It has prove

be reliable in use and period

mance has not been a proble

The Gas Board goes on

list extensions it would like

see the DDS as the cente

future data management in ducts and believe that it will

in reducing the effort is det

NMW Computers is

complimentary, complained a sudden failure, and is paid

larly critical of the supple

"Training non-existent is programmers," it notes tend "and more especially many

measure TSO usage and b

CMF-MVS has been enhant to be compatible with it is slone of MVS through sys-

VALUET 3

effects on system performa TESC also announced il

Extensions

tionary System, DDS. And this time, ICL is on the way to

The dictionary which is used

with the IDMS database

management system, was writ-

ten from scratch and has been

available under VME/B for

three years and under VME/K

Members of the DDS User

Group are now clamouring for it

to be available under all ICL's

other supported operating sys-

The answer from ICL is that

the DDS will be supported under TME on the ME29, and under

the 1900 George operating system both native and under DME,

However, nothing is planned

for System 4 users, led by the

Post Office, who want it under J and Multijob, or for 2903/4 or

by the end of the year.

System Ten users.

neeting most of the demands.

THE line of performance evaluation tools sold by the European Software Company under the name Comprehensive Management Facility has gained two

CMF-VS1 is aimed at system ning and capacity planning for omputers running under the VS1 operating system, Release

At the same time the Mi THE Reality operating system marketed by a distributor in the version of the tool has been hanced with new reports be has proved so attractive that More recent versions of the

ere on the way.

Microdata sells it in the UK litualit CMC UK, a company it company it company it company it company it company it destructed.

diterechnique has no con-Redifon. CMC's US assets and sellen with Microdata but base were acquired by Pertection of its o

Mancial pack on UK market

HE PPS: financial planning words that generate models and sended may be the most exgraphs; PPL dialms that two days training is sufficient for days training is sufficient for actual powerful, claims afficient use of the package. the must powerful disims take Programs Ltd, which is skeding it in the UK (CW, such a)

The package already has over 300 in house users in the US and is available on a range of hard

RING Drospa Data **XFOR** ADDS VIDEO'S READING 589393

ICL takes account Writers of the on Data Dictionary software should use it'

Systems' office in Slough and you will find that the girl at the reception desk has a terminal within reach — as do the secretaries upstairs, the managers, and the director of the European Software Development Group,

Dr. Martin Waters. They are all using Reliance II, Perkin Elmer's venture into software launched at the NCC in the US earlier this year.

"I just refused to sit down with a hand held calculator to work out another year's budget," explained Waters, "and I believe that the people who write the software should use

The product's forerunner, Reliance I, was launched 18 months ago, pulling together the Cobol, transaction processing and database software for Perkin-Elmer's 32-bit "super-

Reliance II is a more ambitious project, with word processing facilities and an associated query language; 1032 it represents PEDS' first major push to win a commercial market for its machines, and a departure from its traditional

scientific user-base. Like all PEDS' software pro-

where PEDS devotes a team of 50 to Reliance development. As well as being a develop-

ment tool, Reliance is used at PEDS for secretarial jobs, documentation such as printing manuals, for managerial tasks such as forecasting, and is finding new applications all the time. The receptionist will soon be using it to trace the availability of pool cars.

Own tools

"In everything we do we use our own tools," said Waters, "and we're the most critical audience of our own product that we have. If we find a need rest of our users."

The typical target of the product is the large company or systems house using Cobol, with a need to produce applications software as well as running a database and controlling

PEDS is entering a market which is awaiting the IBM System 38, and lamenting Trax. Digital Equipment's transaction processing software. Trax's poor complaints by users and a new

More versions of Reality ops system on way

versions of it are available from several companies — and more

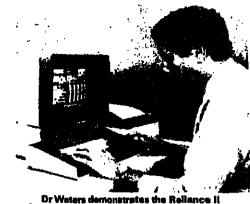
Utually credited to Richard
"Dick" Pick, it was originally
tweloped under a US government contract, and Pick put it
into microcode for US
minimaker Microdata.

Microdata licensed its early

Milliomputer for manufacture Whitertechnique in France, In-successful developed Reality A French accent, Realite,

LA120 180 C.P.S. PRINTER TERMINAL Mouse operating system, are West Germany.

On demonstration IFPS is available on a range of hard-ltoyed to be easy to use; ware including Honeywell, to with like a very high level Digital Equipment, Prime insuage with English key- Hewlett-Packard and Harris.



system being developed for DEC's larger machine, Vax. Meanwhile PEDS, which is the "query-by-example" pattern and security precautions match those of System 38, with geo-graphical and user control from confident enough to quote a 1.4 performance improvement on any terminal, and several levels

of password control.

A useful feature is the desk

Reliance users are in the US at

the moment, PEDS has won

Reliance to first-time users. This top "Pussycat" printer which provides hard copy of screen includes hardware. "The user group is suggesting ayouts. The system demands improvements all the time. For little in the way of "operational instance we have added security skills", guiding the user through by linking screens and areas of improvements since Reliance and developed the query language. But we've chosen the prag-Although the majority of matic middle ground; to get it right without taking forever at

said Waters. orders in Australia, the Middle The query language follows

Vax for its 3240 in US adver-

tising, charges £8,600 for

for 20th of price the Unix operating system was the starting point and we which costs about a twentieth of the price asked by the system's originators. Western Electric. ities, as well as speed. It can work up to five times faster than has been developed by a company in Chicago, Mark Williams. the original."
Pointing out that the software

Written in the Unix language "C", the Mark Williams system, was proprietorial rather than obeying the usual Unix licensing arrangement, he added "If ICI called Coherent, at present works on Digital Equipment or other manufacturers were PDP 11-34s, and machines based interested we would supply it on on Intel 8086, Zilog 8000 and Motorola 0800 micros.

Licence

The licence for an object-code version of Coherent costs \$1,500 per machine, with a small monthly charge for maintenance. The full-scale Jnix licence costs \$28,000 for

Unix, a time sharing operating system with extensively deve-loped utilities, has long been the darling of PDP-11 users, and has recently won popularity in the

We can deliver our complete range of business systems at competitive prices. Series 5000 128 K−256 KB Memor Series 1000 operating system have appeared on Honeywell Level 6 minicom-puters. Assembled by Ultimate ● Up to 20 terminals ● Up to 1000 MB Disk ● 120 CPS to 900 LPM Printers ● Magtape option ● Price: £23,000 — £90,000 . ● Delivery: 4 · 6, Weeks ● 64 K - 256 KB Memory 🛎 Up to 7 Terminals · ● 120 CPS to 600 LPM Printers Corp, they are marketed in the ■ Up to 20 MB Disk UK as the Ultimate system by Universal Computers and EDP Magtape option Price: £15,000 - £30,000 In the US, Pick is rewriting the operating system for the Zilog Z8000 16-bit microprocessor on behalf of Applied Digital Data Systems, ADDS. ADDS is the subject of a takeover bid by Mitel Corp of Canada, CMC-UK is wholly contains the corp. ● 64 KB Memory ● VDCI and Keyboard: 120 CPS Printer 10 MB Disk wholly owned by McDonnell Douglas Corp. CMC-UK has no connection with CMC Europe, which is now owned by Rediffusion, parent of Series 3000: 128K--286KBMer Clp to 8 Terminals Series 6700 256 KB in 4 MB Memory Up to 60 Terralpes • Up to 1000 MB Disk 120 CPS to 900 LPM Printers • Meglape option Price £80,000 - £200,000 • Delvery 6 - 8 Weeks Up to 250 MB Disk ● 120 CPS to 600 LPM Printers Minglape option Price: £26,000 - £40,000 Délivery: 4 ÷ 6 Weeks. ferns and Hardware — Comprehensive i Programs and Software — Creative incering and Back up — Comprehe Systims — Tomorrow's needs, packaged today

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Service programming skills Software houses usually have previous experience of the type of work they are tackling, while a public sector team would have

to start from scratch. Efficient software houses are often forced, they say, to sell their goods abroad when they could easily be of use in the UK.

For programmers working in the public sector, this might places. They claim that they are seem a little unfair. But if you being prevented from getting are one of those people, you will know that skill and efficiency is large government contracts because the Civil Service unions maintain that this work should often hampered by "red tape" and the bureaucracy for which Their argument goes that they have the expertise, so the job could be done quicker and better

the Civil Service is notorious. Recently we discussed how government cuts are affecting programmers working in the public sector, in particular the dealth Service. Yet unious insist that programming jobs should be done by these people.

Pay survey

Programmers in the public sector also earn significantly less than their peers in private industry. We learnt last week from a pay survey that IBM is the third best company in the UK as regards pay, with an IN this "skeletal" square-root ex-average salary of 28,593 traction sum, each of the figures. We do not suggest that has been replaced with an X. The

everyone should go and work only clue offered is that the root for IBM which is no mean task. Itself is an even number. See page But pronically, it is also difficult 30 for solution. Do we need unions?-

WITH all this talk of unions, it would be interesting to find until ust how important programmers child it is to belong to one Unit recently only DP at all who wipped in government installations were union members.

These have this far more common for programmers to join unions such as ASTMS of ADS syen, if lifely worksfor herse private gompanies.

Liver, staff at IBM are now beginning to take interest in the programmers to personnel to programmers to join unions such as ASTMS of ADS syen, if lifely worksfor herse private gompanies.

Liver, staff at IBM are now beginning to take interest in the programmers with things as negotiating pay ideals as often superfluous. And that's how the company wants it to be.

So what's the point? Salaried in the marketing division at ICL were recently involved in the marketing division at ICL were recently involved in such things as negotiating pay ideals as often superfluous. And that's how the company wants it to be.

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And that's how the company wants it to be.

Civil Service. It is one of the few employers which does not like taking on graduates of TOPS program-

programmers who work for the Civil Service. Do they agree with the claim of UK software houses that government contracts should go to them, because they geared towards certain projects than public sector program-

Puzzler

X X X X XX XX XX XX XX XX XX XX

X XX XX

IBM scientists at the Thomas J. Watson Research Centre in Yorktown Heights. Based on a cryogenic Josephson sampling technique, it will be used by IBM in its research effort to apply Josephson junctions to computer technology.

Circuit design **courses**

THREE one-year MSc courses in integrated circuit design are due to start in October at Edinburgh University, the University of Manchester's Institute Of Science and Technology and jointly at Brunel Southampton Universities. 🕐

Funded by the Science Research Council, the courses will run in collaboration with the microelectronics industry. They will involve practical work so that the student will oversee the production process of an integrated circuit from its design to its realisation on to silicon.

As recommended in 1979 by an SRC panel chaired by Derek Roberts, director of the GEO Hirst Research Centre, the SRC is providing assistance to the urses. Funds will be available for necessary equipment and the students will have access to computer aided design and elec-tron beam lithography facilities at the Rutherford and Appleton laboratories and to the SRCsupported silioon processing facilities at Edinburgh and Southampion Universities

Games boom

may peak BALES of microprocessor billion this year, up from 440 million this year, up from 440 million in their first year, 1878, say Boston Securities Analysis, Saturation level for handheld games is expected to be reached this Christophy.

The scientists claim to have measured fast waveforms of amplitudes as small as 120 microvolts using the new technique. This represents an improvement in sensitivity of

Resolution has also been improved from 25 picoseconds to six. Scientists believe that when the switching speed of Josephson tunnel junctions is improved the resolution will approach the subpicosecond re-

The instrument, or sampling oscilloscope, digitally samples periodic waveforms to project a reproduction or image of the signal shape on to the screen so that measurements can be made. It is only by cryogenically generating these fast electrical signals, which are otherwise virtually impossible to measure, that measurements can be

Attempts at measuring these signals with an ordinary sampling oscilloscope would require a high frequency interface to bring the signals back to room temperature. Conversely, a similar interface would be required to bring a fast room temperature signal into the

Samples of 16K EEPROM

SAMPLES of Hitachi's 16K EEPROM (electrically erasable: and programmable read only memory) are expected in the UK this month. Volume deliveries are planned for the end of the

The HN48016, available from Dialogue Marketing in Bourne End, Bucks, has a maximum access time of 350 nanoseconds and is compatible with existing 16K bit EPROMs. It is capable of 1,000 program and erass cycles.

MVS Basic Operations 10-14 November MVS Advanced Operations 3.7 November.

OS/VS Utilities 3-5 November

MYS Dumip Analysis 3-5 November.

的是特殊的

OS/VS JCL (5 Days) 6-10 October and

3-7 November

Operations Courses

VSAMAMS 20-30 October and Let Our training

MYS Dump Analysis 3-5 November.
2900 VME/B Basic Operations
2900 VME/B Advanced Operations
20024 October
Datapoint Operations 1 16th October
Datapoint Operations 2.77th October
Advanced Datapoint Operations
18-20 November 5 Telephone Of a 18-88 104

cryogenic environment for measurement with the Josephson sampling oscilloscope

In its Josephson junction computer research, IBM needs a technique for measuring fast riodic signals that are already in the cryogenic environment ~269degrees Centigrade).The Josephson sampling technique has been invented and patented by the IBM researcher, Sadeg

Many other potential applications exist in the engineering

Sampling of cryogenic tists to make nonequilibrium will be in London. superconductivity measurements in the transient state, rather than in the more normal steady-state, to obtain data on superconductivity parameters.

Scientists say the Josephson sampling technique might be expandable to measuring waveforms other than electrical signals, as Josephson junctions are sensitive to optical signals.



The Sanyo System 7000 Z80-based microcomputer will be available from 22 dealers throughout the UK in basic price of £4,545 a 32K RAM and 560K floppy disc version can be bought, or dealers will be offerbated.

and solid state physics fields, says IBM, but the company itself is considering using the technique to investigate dynamic characteristics of Josephson junctions. Dealer net for System 7000 SOLE UK distributor for the Japanese Sanyo System 7000 Z80-based microcomputer, Memory Company Company

System 7000 Z80-based microcomputer, Memory mputers, is forming a dealer network and a maintenance service. Dealers are to be set up at 22 waveforms could enable scien- locations throughout the UK, and four of these

Field maintenance will be carried out by Systems Maintenance Service (SMS) of Feitham at a charge of 12-13% of system value annually. Initially SMS will cover the Manchester, Bristol, London, Glasgow and Coventry areas, but this will eventually be extended to eight areas in total.

SMS, which also maintains IBM systems, guarantees a four to eight hour response for on-call repairs and has a full spares facility. Three of its 40 engineers are already undergoing training with the System 7000, at Memory Computers in

Memory Computers told Computer-We that it plans to provide maintenance facilities systems still under guarantee at its new fatter inchiey from September. Systems from Sark European distributor in France will be chedel at the factory and undergo 48-hour contin

with 32K of RAM and 560K of floppy disc but can be extended for an extra £3,000 to 64K of Miles and 4M bytes of floppy Memory Computed dealers will be offering a leasing option, and staff training as standard. Software package in payroli, invoicing and stock control will keep able in 5% inch floppy disc format for around the control will be a 550 5% inch floppy disc format for around the control will be a 550 5% inch floppy disc format for around the control will be a 550 5% inch floppy disc format for a format

Free disc control from Cromemco

EDINBURGH based Cromemco distributor, Microcentre, will be supplying the company's new double density disc controller from September at no extra cost for two months. The controller designated 16FDC, will be available with all three systems in the Cromsmco range, System 2, 3 and Z2H, but will provide the greatest enhancement to the

take the strain

Each system comes with 64K of RAM, a Z80 processor board and a printer interface board. Their main differences ile in price and storage capability: System 2 uses 6 in flooply discs and costs £2,126; System 3 uses 8 in flooply discs and costs £3,725; the Z2H has a 10 Mbyte hard disc capacity as and in a dual 5 in disc capacity as well as dual 5 in

By adding a 16FDC to the System 3 its storage capacity is more than doubled to a total of 2.4Mbytes. When used with either the System 3 or the Z2H, their capacities are increased from 386K-bytes of data to 772K. The controller can also run either single or double density boards which are single or double sided. When working in a single sided and single density, the formatting of the disc conforms to IBM 3740 standards.

Microcentre expects of the System 3 by about £200

after the two month period.

Advice for new users AN independent advisory ser- a software and hardware and

vice for firms considering buying their first computer has been set up in Lewes, Sussex by software consultant, Delia Venables.

For around £300, four or five times less than a bureau would the set of consultant or five times less than a bureau would the set of consultant or five times less than a bureau would the set of consultant or five times less than a bureau would the set of consultant or five times less than a bureau would the set of consultant or five times less than a bureau would the set of consultant or five times less than a bureau would the set of consultant or five times less than a soltware and narowaceus.

limes less than a bureau would charge, a consultant spends a day investigating the client's a wide range of areas included business and attempts to match

COURSES

DATA Training has introduced a series of courses for IBM users. The courses are for Cobol programming and are designed to cover practical aspects of program writing, including basic programming skills, specification analysis, charting techniques, programming language, job control and debugging. The 370 series courses are of five weeks duration. The fee is £750. Training centres are in Manchester and London. Datails are obtainable from Data Training, 7/9 Norwich Street, Holborn, London, EC4. Tel. 01-404 5444.

A FIVE DAY computer training course is being run by Learmonth and Burchett Management Systems. It is designed for DP people avaluating detabase or working on database development projects. Dssiening a database is broken down

after the two-montin period.

ILCHOBITS

ALCHOBITS

ALC

MSS Computer and Busines (a) sultancy, is running a number of courses in September, in Vertical Sussex. Two of these are Course appreciation for managerinesia and Principles of O and L informer runs from September 1981 assumes no previous knowed data processing, it cost at the ration fee and £120 + VAI. In latter course runs from September 1981 and 198 ration fee and \$120 + VAI.
Inter course runs from Septem
8-11 and is designed to introduce
unfinitiated to the basic principle
unfinitiated to the basic principle
O and M. The fee is all register
and £180 + VAT: Details are
able from MSS. House, & Ober Road; Worthing, West pures.
(0903) 34785/8.

Brospa Data SCREENS 213

Small systems for Navy's big ships

ABOUT 100 of the Royal Navy's bigger ships are to be equipped with small computer systems for general onboard administration under a project called Oasis, Onboard ADP Support In Ships, and the contract looks like going to a non-UK based supplier (CW, August 21). According to the Ministry of Defence, machines from four suppliers are currently being walnated. All are firms with some manufacturing capability in the UK but are not UK-owned.

tromagnetic interference, the

MoD may be forced to buy much

more expensive ruggedised

At the same time MoD is carrying out tests to check that the commercial kit being considered can withstand the rigours of If none of the hardware under evaluation can stand up to pro-blems like vibration and elec-

Applications for the Oasis ystems will include stock con-IMPCON, the manufacturing trol, pay and personnel and maintenance management. The plan is to have the first installed control system already available on Digital Equipment based systems from Bunzl and Systime is The MoD is also looking at the now being sold in an updated version by Cable and Wireless possibility of systems for RAF ubsidiary UK Services, on Data stations that will combine

General ČS series hardware. general administration with Developed originally in Basic for DEC hardware by software command and control on the basis that the two functions are consultants Computer Systems Development, Impcon has been rewritten by CSD in the CS interdependent. For example certain types of stores may be needed at a time of mobilisation. erles interactive Cobol. Accor-The MoD also says that it is ding to UKS the new version investigating the whole area of offers much more extensive office automation, including material requirements planning electronic mail and word pro cessing, but is "approaching

facilities than the original Basic - which stands for Inventory Management and Production Control - also comes with modules for handing parts control, stock location, purchases works orders. movements, bills of materials,

DG version

of Impcon

from Bunzl

work in progress and costing.
It can be supplied by UKS on
any of the three biggest CS systems — the CS 50, 60 and 70 — at Outback THE durability of Hewlett-Packard's HP-41C program-mable calculator is being put to the test on an 8,000-mile journey prices for the total package that start at around £40,000. The Impeon modules run under Icos, interactive Cobol Operating across Australia. Outback '80 is joint British-Australian military expedition which will take

UKS has a well established field service operation covering most of the UK, providing third farty maintenance as well as servicing its own existing base of Data General Nova and

DEC video rival

DIGITAL EQUIPMENT users rould be interested in the PT-100 video terminal designed and built in California by Plessey Peripheral Systems and now being sold here by the Northampton-based UK end of the peripheral firm. The PT-100 trompatible with the DEC VT-100 and here with the DEC VT-00 and has a 132-column

Calculator

four months to complete.

heodolites to check progress.

astro-navigation,

Crown Agents' order order worth £125,000 from the Crown Agents for VDU clusters to attach to its Honeywell Level

IP adds interfaces, bar code and magnetic stripe readers

HEWLETT PACKARD has added more facilities to its range of memory data capture terminals. The HP 3075A desk top and 3076A. magnetic stripe reminals are now available with bar code reader, and two new standard interfaces the HP-IB.

The HP IB and RS 232 C in tellaces enable the terminals to £100,000 system link with such devices as page other specialised measuring Europe's largest motor auctions equipment

ejulpment.

The HP 3077A time reporting 4 system from Honeywell. It is to measure the firm, has ordered a £100,000 DPS teiming is also system from Honeywell. It is to measure the firm's Farm ham, Surrey headquarters.

READING 589393

A DOMESTIC telex service called Intertext has been launched in the US by ITT Domestic Transmission Systems and is the telecommunication giant's first entry into this market in over 40

Previously, the US domestic telex market was dominated by Western Union with Tymnet nd Telenet making minor ad-

Initially, the Intertext service wili be avallable in Boston, Chicago, Detroit, Houston and Los Life in the old 'dog' yet THERE is steady business to be done in prolonging the active memory. Renders with long life of ageing computers, and Sintrom Electronics is offering Digital Equipment PDP-15 users some transplant surgery. Sintrom has introduced bulk core backing storage for PDP-

memories will recall that the PDP-15 is an 18-bit word machine Fully compatible with the DEC RF15-RS09 fixed head disc, the Dataram BC-205 bulk core is claimed to give a "dramatic" improvement in system throughput.

NCR banking on success of on- and

COMPUTER WEEKLY, August 28, 19:

offline terminals NCR has introduced two terminals for online and offline use in building societies and banks. The NCR 2261 can operate as an offline data capture device

Features include a high level parameter language, 16 programmable keys, a 40 column printer, and input forms can be displayed to help the user through rarely-used transactions.

Security

Replacing the NCR 270 terminal, the 2270 may be used by up to four branch staff, each with his/he own identification code for security purposes.

The 2270 comes with 10 programmable keys and two printers. The 40 column printer provides a journal copy of each transaction while the 90 column device updates the customer's pass book.

Optional features on the 2261 include a magnetic stripe reader and personal identification number keypad for reading and verifying customer identification information from plastic

Our picture shows the NCR 2270 in use at the South of England Building Society's Shepherd's Bush branch in West

COMPANY NEWS

ICL sees little threat CW SHARES TABLE in tendering change

THE imminent end of the MoD business is likely to remain government's single tender purchasing policy with ICL for mainframe computers looks increasingly like a trivial problem for the company, ICL says that single tender business accounts for about 51/2 of turnover, or

about £40 million in the year that ends in December. This ties in with figures from the Ministry of Defence, which says that it is spending about £28 million on hardware, that at The expedition is relying on least two-thirds of this is spent with ICL, and that MoD com-puting accounts for about half of The HP-41C will be used for the

Wyly boost

l government computing. From ICL's point of view, the nany calculations involved. The calculators, already widely used in surveying by the Royal Artillery, will be subjected to some rough treatment on the trip, including temperatures: ranging from 40°C to freezing

from antitrust case

FIRST half results from Wyly Corp, parent company of the University Computing Computing Company, were affected dramatically by \$25 million received from telecommunications giant.

AT&T, under an anti-trust March 27). The \$25 million was treated as a gain from discon-

tinued operations, After deducting the \$25 millich and also an extraordinary credit of \$13.3 million resulting from the utilisation of US and foreign tax loss carryforwards, first half profits at Wyly came to \$3.6 million, more than twice \$3.6 million, more than twice the figure for the first half of 1979. First half turnover jumped from \$41.4 million in 1979 to \$56.9 million this year.

In its anti-trust case, Wyly alleged that AT&T sidjusted its rates to make Wyly allefated microwave data transmission accordes Datran uncompetitive.

microwave data transmission service Dagram; uncompetitive. The case was settled out of court with no admission of liability having deen made. Under the agreement AT&T paid a total of 350 million from which Wily anded up with \$25 million setter, giving \$11.5 million to the Datran trustee and covering its own legal costs.

safe on two grounds: defence is excluded under the GATI code, the worldwide western agreement on public procurement

15s which offers up to a

and is also partially excluded under the EEC directives on computer purchasing. The codes also exclude research and development applications and these represent a substantial part of MoD computer applications. So ICL is likely to continue to get almost half of the business it

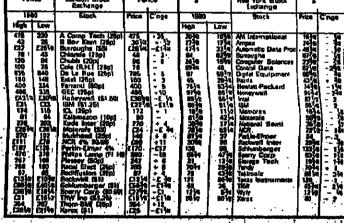
now gets under single tender, putting perhaps 3% of its total business at risk: But with, apart from the PAYE system, few completely new projects being mounted by government, compatibility requirements are likely to see the replacement systems going to ICL in most

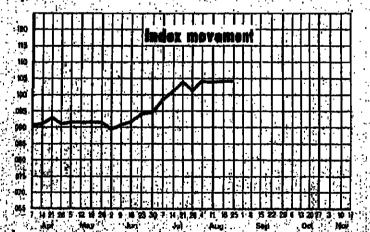
cases.

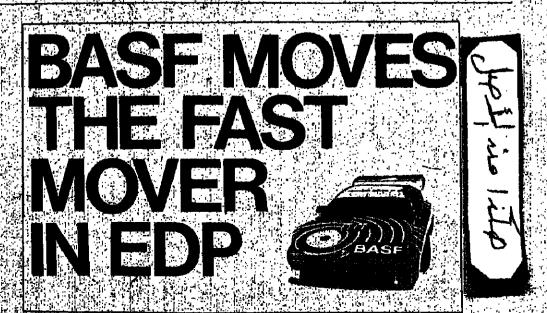
Even if the company, on a very pessimistic prognosis, held on to only half of the remaining on to only half of the remaining government business, only 115% of the company's turnover would be at risk through stringent adherence to the fules—asy £12 million in the first year of operation of the policy.

Clearly no company likes to loss business that it, would norther likes of business in the potential loss of business in

the UK is the prospect of gains







PEOPLE and EVENTS

Top sales executive wins trip to Bahamas

five day trip for two to the Bahamas. The prize was given to Benyon for his outstanding sales performance. Automatic Data Processing, and

by Automate Data Processing, and the award was presented by Donald Boyt, ADP's ammaging director. Benyon, with other successful sales executives from around the world, are brought together annually by the company in recognition of their achievement. The venue this year is the Dahamas Princess Hotel

Full members

David Webster and John Qualthrough have been regraded to full members of the institute of Data Processing Management, Webster is managing director and chairman of Ahnda Systems at St. Albans, Qual-trough, of Cheltenhum, is executive director of Minerva Computer Sys-

Jim Yeomans has joined Data Logic's word processing division as sales executive. He was previously

executives will be congratulated by the corporation president. John Weston, for their contribution to the fiscal year 1980.

Apart from tooking forward to the expected sunshine, Henyon is glad of the opportunity to meet other sales executives. "I'm looking forward to an exchange of information. attitudes and ideas with them all." he

He joined ADP three months ago, after ten years' sales and sales management experience.

Dr Steven Forte, managing direc-tor of American Microsystems, Europe will be expanding his duties to include AMI sales throughout Europe, and management of the de-sign centre in Swindon. John Richardson has become vice-president for the domestic control marketing group, having respon-sibility for all sales and marketing

support in the US and the Far East.

COMPUTER WEEKLY

is holding its

AnnualBall

on Friday October 10 at the

Royal Lancaster Hotel, London

Cabaret

RAY ALLEN and LORD CHARLES

Neil Williams has been appointed manager of Viking Recruitment having worked previously for Knight Computer Services as soft-



national's golf team is one of 45 teams which took part in the Council, the tournament attracted 17 sponsors, including Swade, ITT and British Telecom from the ejectronics industry. The Sweds team professional, Mark Thomas is on the left of the picture. Other team members are Robio Fisher of Sweds, P. R. Pitts of Gateway Foods and Ken Turner of

More golf

Christopher Kay of Matlock has won the Northern England regional heat of the NCR National Long Drive Golf Championship, with a drive of 228 yards, 6 inches. The runners-up were Gary Furness of North Manchoster and Simon Sherratt of Sheffield.

All go on to the national final, to be hold at Stoke Poges Golt Club on September 29. The championship is insored by NCR and organised by the magazine Golf World.

Auditor's award

A LONDON telephone industry Cadmus Memorial Award. Charles
Duly, was presented with the award
by the Institute of Internal Auditors.

IIA, for exemplary service.
Duly is a certified internal auditor for Standard Telephones and Cables and has been a member of the IIA since 1963, having most recently served it as European West regional

Stewart Vassie has joined Infor-mation Services and Equipment in the technical marketing division.

joined the company as a customer engineer for the Southern branch in 1978, and moved to the Northern

branch a year later as senior engin-

Mike Hardwidge has been appointed managing director of APL Plus. He joined from Germany where

he ran the company's operation, having started it three years ago.

Big deal

has been placed by Alcan Aluminium UK.

ADP will provide Alcan with

its own internationally available time sharing service, through ADP's network. It is ADP's

enth European on-site install:

Mark Clausen has been named company controller at Mercator Business Systems in Santa Clara, California. He was formerly senior accountant with Main, Hurdman

Diktat has made two management appointments. They are Brian Aspin, support manager and Roland Hoggard, special projects manager. Aspin was formerly an analyst/ programmer. Hoggard has pre-viously worked for AES Wordplex and Redifon Electronics Systems.

Nigel Bulpitt is now a director of Burroughs Machines, the British subsidiary of Burroughs Corp. Prior to this appointment he was director of planning and administration at

DIARY

SEPTEMBER 1-2 Microprocessor workshop. Computer Lab, University of Liverpool. SEPTEMBER 3-5

Logic and microprocessor system. design course. Computer Lab, Uni-versity of Liverpool. SEPTEMBER 7-12

Introduction to small computer systems in engineering applications, vacation school. Institute of Electrical Engineers, London. Details: IEE, 01-240 1871. SEPTEMBER 8:

Talk on Portability of Portran 77. Dr John Larmouth. BCS Fortran Group, BSC Headquarters, 13 Mans-field Street, London, W1. 10,30 am, SEPTEMBER 9-16
CAPP-80, typesetting seminar.
Royal Lancaster Hotel, London, Details: CAPP-80 Conference Unit, 01-

SEPTEMBER 10 ...

Meeting, IBM CUA management group, IBM Computer Users' Association, National Exhibition Centra, Birmingham.

Meeting, IBM CUA computer based iraining sub-group, IBM Computer-based iraining sub-group. IBM Computer Users' Association, Bank of Scotland, Edinburgh, Details from Mrs Specials, Tel; (0) 551-1643.

SEPTEMBER 17-18

Meeting, IBM CUA Series-1 group, IBM Computer Users Association, White Swan Hotel, Stratford-on-Aves. Details from Mrs Specials. Tel; (01) 551-1643.

Conference. Computer, security. NCC Security Awareness Scheme. Owen's Park, Manchester. Details from Security Awareness Scheme Manager, National Computing Centre, Optoid Road, Manchester, Mi 7ED, Tel; (61-225-633).

SEPTEMBER 18-19

Meeting, IBM CUA Ideal suchorlies group. IBM Computer Users Association. County, Hall, Nagwich, Details from Mrs Specials Tel; (01) 251-1648.

SEPTEMBER 28-26

Wissing, IBM CUA Programming Group. IBM Computer Users Association. County Hall, Nagwich, Details from Mrs Specials Tel; (01) 251-1648.

AN ORDER worth £800,000 over the next three years to ADP

director

Chris Scorey has become tooks. director of Westcode Equipmen, subsidiary of the Rochfert Thompson Group. He little Rochford-Thompson as a proper mer and systems analyst ad poto to the new appointment was set ware manager.

Chris Tofa has joined intend puter Systems as general sia manager. He was formerly ran executive covering the North 12 gland for Digico. Tofa is a membra the institute of Purchasing and Se

Two Centronics sales exe have been promoted within their subsidiary. Colin Zarda, protect sales executive for the Midner now special accounts managed Drinkwater has been promot sales executive to manager with

Frank Brown has appointed a consultant to Ge Consultancies, He was present consultant to Woolworths, and on computer systems, program operations and standards in operations and standard Ame Grice has taken up the post of grammer at Chess Consider having previously worked with on a stock control program Colonel Foods, a franchise # 12 tucky Fried Chicken

Malcolm Rapps has been protect to sales manager (co ponents) of Beckman instrument He has worked as sales eagen responsible for the South of Eagen for the past five years.



I'VE JUST HAD A CARPET FIRM ON THE



THEY WANT OUR IN MICROCHIP DESIGN



雷

2

BUT TO USE THE CHEPET PATTERS

by great attention to sophisti-saled hardware and software, but tall to realise the importance of such down-to-earth devices is low speed printers.

Advice for the operations manager on how to select low peed printers is given in Data Centre Dialog, a part of Augrbech's data centre operations management service.

The author emphasizes that the selection of low speed printers should be given as much attention as the acquisition of soliware.

The manager as a contraction of the data contraction as the acquisition of soliware.

The manager should first consider the application and weight of workload before the low speed devices available to the market.



in job stakes for Threshold men

NO job-hunting problems for John Greggor: the former NCC Threshold student was fixed up with a job in the industry long before completing his course at St Helens College of Technology. After 42 weeks of study and practical work based on the BEC/TEC National Certificate syllabus, John is now employed as a trainee operator at T. S. Hughes, a general store in Liverpool.

Promotion

long time yet because I enjoy the

John Thompson, the other

NCC Threshold student fea-

tured in Op Spot, has not been quite so lucky. The 17-year-old

from St Helens is currently

seeking a position as junior

"I've been along to the careers office and the job centre but nothing has turned up yet. I'll

give it a couple of months, then

I'll have to look for jobs outside

computing.
Jack Bell, the person who is

responsible for the personnel

and industry placement side of the NCC Threshold courses at St

Helens College of Technology commented: "Both of the lads

passed all their exams. I'm glad

fixed up but John Thompson will

have to continue looking

to say that John Greggor is all

perator in the industry.

Well pleased with the placement, the 19-year-old Greggor. Within three months John will told me: "I spent six weeks at the be made up to the position of site during the course. operator, and three months later, experienced or senior

"There were three of us and, at the beginning, the manager told us there were two jobs going. I was offered one of the positions and was glad to accept

Formerly an engineering "You can only be made up to shift leader if the shift leader apprentice, Greggor is now the or partner of a two-man goes to another installation", he shift team operating a Honeywell Level 64 system on a two-He hopes, one day, to move into programming but "not for a

shift rota basis. He went on: "T. S. Hughes is owned by the Owen Owen group of stores so really I work for them. The machine is at T. S. Hughes' site, though.
"We also have an NCR

machine - I'm not sure what model it is - and we use it to ather data sent down lines from

Part of the job

"it's a bit of a nuisance when you've finished the work but ave to stay down the lines. Still. is part of the job, isn't it?"

On the shift pattern employed t the installation, he said: Days are from 7:45 in the moraing till 4:00 in the afternoon. and evenings are from 3:30 till 11:00 at night. By train it takes me about an hour to get from my ome near St Helens to the site il Liverpool. That's not too bad,

AVE you ever worked on a

arge system which has come to

fint ribbon on the hardcopy log

coming tangled up in the print

That happened to me on

you might think, that such a

meningly insignificant device

an stop a system running, say.

O batch jobs as well as pro-

The point is that some

veral occasions. Ridiculous.

Importance of the

10W-speed printer the weight of the hardcopy

> Having done that he should then consider such factors as device, speed, quality of print — which is sometimes lound wanting on such devices - and whether the model can accommodate the necessary a print-out, speed equal

important. The manager should bear in mind that some manufacturers offer a variety of lease, purchase, maintenance

and discount plans.

The manager is also advised to seek out existing users of low speed printers and to ask why they selected the equipment currently in use at their installa-

tion.
He should ask the site con-cerned about any installation and operational problems enand operational problems en-countered, and the standard of maintenance and support pro-yided by the manufacturer. The author also distusses the physical size of the units, the availability of delivery schedule and technical support.

Thanks . . .

THANKS for the excellent re Company Address.

If prints importance are the sponse to my request for a site to company Address.

Prints in portance are the sponse to my request for a site to company Address.

Prints in the final ni of will be in contact with the reservention secured pondents soon.



during the course which was run at St Helens College of Technology. Just in case any sites on Mer-sayside are looking to recruit staff at junior level. Thompson can be contacted at 63 Brookside Avenue, Eccleston St Helens Mayersaldo

with a job before completing his NCC Threshold course, fellow

ooking for work in the Merseyside

The two students are shown

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gate further?

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cessor Model 200 is an on-line laser printer

which writes data on to microfilm at a

cost of about 62p per 1000 pages,

Comparable paper print-out could

here getting hands-on experience

into programming PROGRESSION from opera- courses will start at Harrow on tions to applications program- October 20 and run for eight

ning is something which many in the industry, myself included. view with mixed feelings.

On the one hand it enables operations staff to get off shift work, but on the other it is debatable whether such a move nakes good use of skills acquired in the computer room un-

A widely-held view is that operations skills are best employed in areas such as technical support, operations support, systems programming, operations training, management and supervisory positions.

However, many operators are keen to move into applications programming, so the fact that Alian D'Morias, a software operators comes as good news.

"The aptitude test is of a pretty high standard and they have to undergo an intensive interview They will also be under survey throughout the course."

Ron Hunnibal, marketing

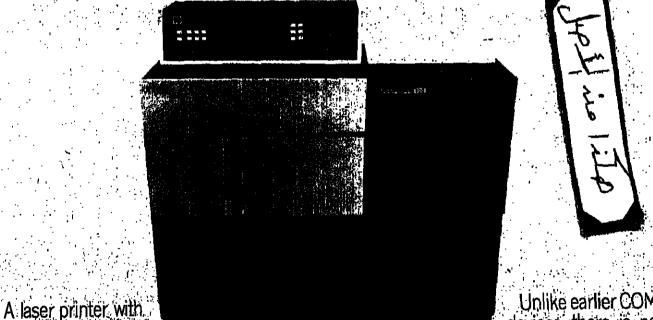
ianager at Allan D'Morias said:

Successful applicants will study Cobol and Basic with hands-on time on Commodore Pets and Data General equip-

Said Hunnibal: "We're go to want between 15 and 20 students on the course and, if it is successful, we will run others. We also help our students find

So if you're an operator who is keen on becoming an applicahouse and consultancy at Harrow, is to run a TOPS programReid, Education Manager, Allar ming course for experienced D'Morias and Associates, Equitable House, Lyon Road, Harrow,

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attended vetat has come to be regarded as

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Society. And proceeds will once more be devoted to a deserving cause associated

with the computer industry.

Vice completed this stder form should be filled together with your chaque to Harry Hutspin/Advertisement Hanaget, Room 13, Dorset House Stamford Street, London SET 91.U.

Alcan Aluminium has been ADP's client since the early Seventies, using DEC System 10-based service. The agreement was signed by Brien Tytherleigh, managing director of ADP natwork systems UK and Europe, and Eric Holloway, corporate systems manager of Algan Aluminium Denis Hoey has been appointed customer services branch supervisor for Redifon's Northern branch. He

THE public relations departments associated with gas regions throughout the UK have had to do more than their fair share of overtime over the past two years or so - since it appeared at one time that almost every explosion was

Just lately, the image has had to be refurbished for a totally different reason — the seemingly unjustifiable rise in gas prices, even when the gas industry as a whole is making extensive profits. The reasons are, of course, political and have little to do with the management of the gas industry In fact at least one part of this industry, the South Eastern gas region, or SEGAS, is one of the most dedicated and enthusiastic users of computer-based financial modelling techniques

in that much-trampled-on sector, the nationalised industries. It may come as a surprise to some to know that the objectives for each of the dozen or so

gas regions in the UK, of which SEGAS is one, are carefully laid down and have to be closely As far as its contribution is

concerned, SEGAS requires, especially in these days of high inflation, the best possible crystal ball, despite the gas industry's record profits in 1979. This best-possible crystal ball turns out to be a mixture of a financial modelling package, modified where necessary to suit individual users, with computers having interactive facilities.

The computers are an IBM 3032 and an Amdahl 470V 7. The TBM 3032 is used in teleprocessing network for customer service and accounting, while the Amdahi 470V 7 is used for a similar teleprocessing network but is mainly limited to regional headquarters at Croydon, where the application is program and tional research and short- and medium-term planning.

The financial package used is FCS (Financial and Corporate planning System) originated. and sold by the British firm EPS Consultants of London. Upwards of 500 firms including quite a number in the US and Canada now use this package.

age used in FCS is as a form of faccountants; Basic' FCS, however is far simpler to use cult) and somowhat less extra-

vagant in its use of statements in the functional part of its appli-

Main components

Its main components are LOGIC and DATA, and the system is row-oriented. Logic contains a sequence of numbered statements which will indicate the terms to be used and their elationship, for example:

> +20 'UNIT PRICE' +25 'VOLUME' +30 'REVENUE' = 'UNIT PRICE' ' 'VOLUME'

DATA allows information to be entered into terms defined under LOGIC. For example:

+20 U, 1.2, 1.2, 1.26, 1.3, 1.33 would allow unit data (hence the U) to be entered into Item 20 - that is, unit price.

The DP user takes to this sort language like a fish to water, and accounting and other staff without any computer background do not seem to have any great problems in learning and applying the system. However, to cater for staff who may have problems in absorbing the language as quickly as more DP-oriented staff and, more importantly reviews. importantly perhaps, to allow however, is for simpler to use the system very quickly than Basic (which, despite SEGAS has further packaged claims to the contrary, is difficulty the FCS system so that, where new and untrained personnel to

complex business — and a very large one. Not only does SEGAS sell natural gas (from the North Sea) and liquefied gas in very much smaller quantities from places like Algeria and Norway out it also sells complete central

and other appliances. Besides the marketing models which effectively determineoverall strategy, the IPM is further influenced by three mafor factors: The philosophy for the IPM and sub-models used

own sub-models; and the speed

and as a whole, can be pro-The philosophy used is that the sub-model used in the IPM but that every aid possible shall be given to the user to facilitate

his interactive working. This interaction is also

With inflation and interestrates still in double figure. greater attention than the needs to be paid to planting so that accurate budget can be drafted to minimize overdrafts and short-ten

At the South Eastern Ga Board, a small team has been set up to develo financial modelling technic ques and apply them at the

The package used for de velopment gives the test an accountant's form Basic which Robert Street says is far almpler to use than the language itself.

Street runs his own con-Bultancy which also has a was also European Editor for Auerbach between 1978 and 1980:

assessment of the SEGAS orecasts is made (see Figure? To give some idea of how if works in practice, Model 20 (ge sales) requires the total number of central heating installation generated in Model 10 (centre heating sales) as input. In addition, Model 20 also requires as direct input - independently all other models - the tou number of initial and replace ment sales of all other appliances; average annual con sumption for all classes of appli year-end; certain maket parameters; historical data for trend extrapolations, compi

Interaction

From all this data, the sales model calculates to domestic gas sales under a wike range of headings and writes output files for other models.

isons and output.

Since such interaction is c cal, the facility with which the relevant departmental or other manager can run "his" models also critical. Fortunately SEGAS can easily package an and the actual user to suit the

user very easily — as has been seen by the example of prompts.

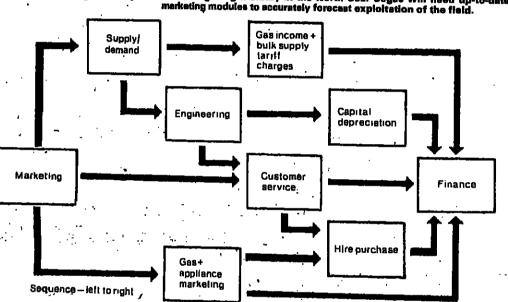
What is perhaps even more relevant is that SEGAS has only a small section, staffed by that or four experts, who are directly concerned with mode techniques associated with This means that the overhead associated with running the system are, especially was considered relative to its utoli

ness, extremely low. pointer to the demise of exter-vagant databases and heavy overhead file manipulations which have in many ways che racterised, the mid-lo lake

REGIONAL CORPORATE PLANNERS (copies from



Offshore gas rig Mercury in the North Sea. Segas will need up-to-date



VDU screens for use in inter-

active mode. The overall SEGAS model is an IPM (Integrated Planning Model), sometimes called the Corporate Planning Model, This is heavily marketing-oriented, as can be seen from Figure 1. The marketing sub-models are he driving force behind the sysem and, whereas other SEGAS models have not yet incorporated historical data in many cases, the marketing sub-models, use up to four years' past data so

These forecasts are necessary necessary, prompts appear on as marketing and selling by the

heating systems, installing them either directly or through its agents, with cookers, heaters

that more accurate forecasts can interactively; the facility with

12 gas regions and by SEGAS is a which managers can run their at which the system, both in part

> and the sub-model for the individual group and management team involved shall be identical,

mportant since data generated in one sub-model can be trans-ferred to other models as re-quired and finally to financial routines where the ultimate

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at limes, and future developments could result in on-call programming positions, will require a high degree of commitment to the job. This will involve unsocial hours This post, in common with most system

anow emetaya MSI egisi to eonehegya brus eldatiseb comminications experience on large computer networks with multiple on-line terminate would be and at least some exposure to VAX-11/780. In addition knowledge and experience of DEC PDP-11 systems systems within the Company. Candidates for this position must have in-depth

maintenance and development of computer operating A systems programmer is required to provide, together with a Chief Systems Programmer, a compact and highly professional team totally responsible for the

computing capability. neadquarters offices with a number of external bureau These will provide a network linking the three DEC mini computers, including two VAX 11/780's. The Nuclest Power Company, a major user of large install a number of install an ecomputers is shortly to install a number of

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PRODUCT NEWS

200 chps forms printer

A FORMS printer that provides continuous printing for a range of business applications has been introduced into the UK by General Electric of the US.

Called Terminet 200, it is available in teleprinter and line printer models. An adjustable tear bar permits the printers to use a variety of standard forms with different header lengths.

The printers can produce from one to nine copies at 200 chps with a paper slew rate of 20 inthes per second. A non-volatile memory allows storage of up to eight vertical formats. Users can tore formats from their own data source with a down line loading option on the tele-

reminet 200 has servo-driven tractors. The print head provides 7 x 9 dot matrix character fornation. An optional 9 x 9 matrix permits underlining and lower ase descenders. Vertical spacing of six or eight lines per nch is switch selectable and paper width can vary from 4.75 io 15.75 inches. It costs from

International General Electric Company of New York (CW), Ill Park Road, London, NW8 7L Tel: 01-402 4100.

pet range of tape dispensers. Both leaflets are free.

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jumper on the power supply

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Aydin Vectar/Controls UK

inches and costs about £6,000.

(CW), Andre House, Salisbury Square, Hatfield, AL9 5BH. Tel:

Hatfield (30) 72771.

Pulse code data

A PULSE code modulation data bit rates selectable by means of a acquisition system that is based on an Intel PROM chip and uses module connector are also thick-film hybrid circuit technology has been introduced by Avdin Vector/Controls.

Called MMP-600 series, it allows the number and type of inputs to be varied up to a

A typical MMP¹600 system consists of modules for power supply, timer, formatter, programmer, sample-and-hold, analogue/digital conversion and end plate, plus one or more mul-

Each multiplexer unit is fitted with a miniature 37-pin connector and provides up to 32 analo-gue channels or 30 bi-level gates. The system can be expanded by plugging in additional

modules.
Aydin adds that the MMP-600 ALEAFLET giving details of the range of self-adhesive tapes from Limpet Tapes has been single-ended or differential analysis. published. Also available is an logue, serial digital, bi-level (parallel-digital or discrete) or

Bit rates are from 1K-bits per Limpet Tapes (CW), Bond House, Goodwood Road, Lon-don, SEI4 6BL. Tel: 01-692 0131/ 4.

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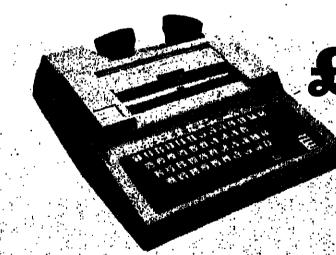
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volt battery supply. Features include built-in vol-tege stabiliter, an audible siarm

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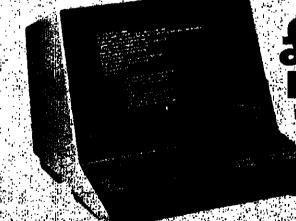
when only five minutes or short circuit/overload device: which switches the unit off until the short or overload is removed. Operating time is up to 30 minutes or one hour, de-reading or size of heaters.

pending on size of battery.
Ling Dynamic Systems Ltd
(CW), Health Works, Baldock
Rosd, Royston, Herts. Tol: 0763

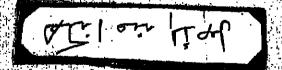


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BOOKS

Chess is yardstick for AI progress

burgh University Press (CW), 22 George Square, Edinburgh EH8 9LF, Tel: 031-667 1011.

CHESS is now accepted as a yardstick for progress in Artificial Intelligence. If computer chess has not yet come of age, it is respectable and serious, as shown by investigations of the last few years in this collection of nine papers presented to a 1978 conference in Edinburgh.

Take just two of the topics: a representation of pattern knowledge in chess endgames, contrasted with an analysis of minimax, confirms, at least to ow, by their range, the genuine comparability of human and Artificial intelligence in the "narrow" field of chess

A promising trend shown in most of the papers is the concentration on small groups of chessmen in the chess endgame. We find valuable results with just three and four chess-

Tel: 01 837 3636

Advances in computer chess, Volume 2, edited by M. R. B. Clarke, 142pp. £7.00. Edin-depth. Note: the two kings are depth. Note: the two kings are always included in the "four."

> developed for this case (and for queen against rook, not covered in this book) have impressed, sometimes confounded, the chessplaying experts. They are, at the same time, the hope of the Al fraternity in their current emphasis on "knowledge."

an ideal basis for collaboration between chessplayers and Al researchers. The paper "How hard is the play of the king-rook-king-knight ending?" Is a case in point. The authors appear to believe that playing this ending perfectly is at or near the limit of human ability.

discussing the limits of human mental capability in the context of computer chess in 1980 is surely the most exciting thing about this anthology.

JOHN ROYCROFT

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-Panacea for all ills?-

A BOOKLET from the Trades Union Congress has siammed the present government's economic policies and puts forward an alternative strategy based on economic expansion, full employment, import restrictions, industrial democracy and a

The TUC booklet puts great play on the role that new technology will have to play and calls for new schemes to encourage investment in new products and new processes.

To pay for this, the TUC suggests that finance from North Sea oil and insurance funds should be mobilised and a more powerful National Enterprise

Board as well as the Scottish and Welsh Develop-ment Agencies would be used to atimulate invest-ment and promote employment and the restructuring of British industry.

A Continental-style National Investment Bank is also proposed along with moves towards more progressive texation and a tax on windfall profits made by major banks and oil firms.

However, the booklet does not propose re nationalising firms or parts of firms that have been sold off by the present government. It merely points to a more positive role to be played by the present core of nationalised industries which would be used to devalop the UK's economic framework and in-

CHRIS YOUETT

A problem shared across the sea

The Urwick report, edited by Ted Cluff. 49pp. £9.95. Computer Publications (CW), Unit 3, 33 Woodthorpe Road, Ashford, TW15 2RP.

THE title of this report could well have been "A problem shared." The book sets out to prove

that the problems of the UK DP industry are similar to those faced in the US.

Having proved this to be the case, mainly by means of extensive quotations, the book

offers no guidelines as to the value, if any, of the findings. The knowledge that the DP team in Kensington shares the same problems as those in Louisville does not necessarily comfort those closely involved.

A major limitation of the book, size apart, is that the survey was confined to 24 organisations — hardly the most representative number on which

to base a meaningful report.

Apparently the problems most troubling the respective groups of installations were those of staff shortages, program maintenance and, particularly for the UK sample, the problems

of new technology.

At least, those were the problems ruling a year of so ago when the study was undertaken.

Ignored

Had the study been made at a more recent date on possibly a wider and less formal basis, there is little doubt that the findings would not have been so

In the present economic climate, the foremost problems would probably be those of budgetting, closely followed by resource management.

Similarly, issues totally ignored in the published survey would now include security,

privacy and the growing awareness of the benefits of the PCM independent suppliers.

Confidence by both the general public and the DP industry is not exactly helped by such surveys which only promote the problem areas of computing.

The various systems described and an assessment of ties and an assessment of the problem.

puting.

The respective talents of the compilers would surely have been better served by charting the progress, achievements and opportunities being generated by the industry.

Less attention to programmer salary scales and more to the benefits of communication retwork facilities would have been

welcome.
Meanwhile, problems do not seem to have been limited to the DP industry, Editor. Ted Cluff has been unable to define a clear.

has been unable to define a clear beginning, middle or end structure to the report.

One major problem area at least to the prospective purchaser of the book is that of value for money Lacking even an index and running to less than 50 pages, the book is priced at 20p a page Or, for US readers approximately 8 cents at current conversion rates.

ALAN SIMPSON

Giving robots serious treatment

Robots in industry, by G | Simons. 216pp. £10. NC(Publications (CW), Oxfer) Road, Manchester, MI 75D Tel: 061-228 6333.

THE gradual transition in the public image of the robot from tin man to builder of Fiats. perhaps an acknowledgment of the fact that robot ongineering now a respectable discipline:

It is now possible to public books which can deal with tech nical aspects of the subje without being obliged to include 18th Century automata, REC and dinner table clearing

This book is one of the first give a serious treatment practical robots and is an into duction to the technology applications of industrial role

By this is meant manipulate which do a repetitive handle task under automatic control without human intervents The book does not deal with to any extent, robot vehicles of human-controlled manipul

Performance

Chapters cover number in stalled and economic aspets typical models and their pear-mance; mechanical features. sensory systems; programme and control; and application a classification of UK supplies

appended,
The book will be found usely as a guide to the current stated industrial robot technology is Europe, Japan and the US at well as an index to suppliers and publications. It is up to date and orings together a lot of other wise scattered information.

However, caution must b exercised in assessing the der lopments described, particular with respect to claims for por

formance.
The book often seems rathe uncritical. For example the chapter on sensory system consists to a large extent of string of brief reports on pe-jects, sometimes derived hos-magazine articles rather than the original source and the fore, subject to an unknown

gree of error.
The section would have been strengthened by a comparise of the various systems described and an assessment of the of gree of development and but

some evidence for the statement that robots with legs but operatic environment; and omestic environment; and omestic environment; and omestic environment; and one of sellician chips, and to journalists, seem to be sent because of a feeling list of sent because of a feeling list of modern piece of writing is omitted in the piece without them; and such plete without them; and such plete without them; and seem would dispute that; it seems that today will come to have some today will come to have some and industrial intercourse when and industrial intercourse with artificial machine at least as a trilligent and capable as our selves. domestic environm

selves".

At \$10 the book seems rated at \$10 the book seems rated are into the book seems rated are into the book seems rated are wings in addition to the book seems rated to graphs. Certain points, such a tographs. Certain points such a tographs. Certain points such a tographs. Certain points such as to be of value to anyone with to be of value to anyone with serious interest in industrial serious interest in industrial robots.

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12. Addition of : to the Cobol

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9. Addition of atructured pro-

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Unfortunately, or fortunately

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to normal commercial data pro-Boolean operations were foreign amongst some users that pretation problems and a feeling lerent factors such us interlinenced by a number of difinternal voting had been inwith Ansi delegates that their it seemed from discussion

major dispute. on the Boolean facilities caused to one not acceptable to the group. The significant change changed their previous position On some facilities Ansi had

sensus opinion. impossible to identify a con-Certain areas where it was of the new standard, there were reach agreement on most parts and, whilst it was possible to Discussion was wide-ranging

and the US. 20 delegates representing seven 150 delegates representing seven 150 member countries ... Canada, France, Holland, Switzierland, West Germany, the UK and the UK. This meeting was attended by

standard,

remaining 99% of the new Cobo had been reached on the substantial agreement which group's final meeting at House a my ymoiorid a bebuchorid roi ent ymoiorid a bebuchorid roi ent key kes sand sa bilogs os bras ses sand seiled file. It is unfortunate that the

represented major organisatio-nal problems for Anal. enoiteled bas of anoitibbs rolam I have attempted to report and list the most important of the taken together these have comments made by the group; perform this task. tools to enforce the selected standard, should compilers not position in the light of represents, or reconsidering its conminittee which the ISO group even enable the development c reaching an Anai view; getting this larger termediate or high. This may for all users to specify exactly which subset standard of Cobol they wish to use, minimum, ining documents; considering the Maintenance of these track-Mevertheless it is now possible which Codasyl is not concerned, these must be clearly stated in the implementors' documentafeatures of the standard with may have an impact upon other not have universal approval or-

language extensions or extra facilities to be included, but Codasyl changes have been in-corporated. Some changes do the new standard, wherever this has been practically possible, This does not mean that all mance rules, which enable character has been in. depending on the individual price are finition made by Codeayi and included such revisions within with implementor offerings. standard. Anai has kept track of, subsequent changes in the de-Cobol compiler requirements easier for users to match their the base document for the new modules which should make it

version, which has been used as least, desirable in any case. It is the latter JOD, the 1978 been retained, along with their sub-division into different levels Ignore these changes, particularly when most of these are, at expect sither Ansi or 150 to Therefore it is unrealistic to

> changes in comparison with its Inition (JOL) contained major 1978. On each occasion, the published Cobol Journal of Debeen re-published in 1976 and The definition of Cobol has

authority, the Codasyl Cobol beyond the 1974 standard, under the direction of the responsible continued its development If, however, further argument. If, nowever, further ar armen af the condition of the condit

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Westing, such as database stab greenial to modern as skele, and lacks many facilei brandard 1974 standard is Thy that it is needed. The edag a new standard is quite The second reason for pro-

A Mai for public comment later that a likely that a brailed bedraildud ad lilwin brainstaleto

Manual the proposed draft was ground discussion with group meetings.

As result of these discuswithings per year schadule preof of thats gringling the at additionally adhered to its Tet And Cobol subcommittee erings; at Washington, September 1978; at London, May 1978; at London, May 1886. The group has held three

nepresenting ISO member genetional Cobol Experts and in consultation with an The new draft was to be pro-

Jodo Standard for Cobol. h produce a new draft intermake the responsible for subcommittee responsible for programming languages, TC997/SC5, at mag languages, TC97/SC5, at mag languages, TC97/SC5, at man languages, TC97/SC5, at man languages, TC97/SC5, at man languages, TC97, requested Ansi languages, and languag tand edt to etews vhaling

The review is currently under micw the present standard Managementy, the Anal commit-serges, X3, requested their burness, X3, requested their cool subcommittee, X314, to mobilen to this regulation. And requires that all its that the second in the second is no second in the second is no second in the second in t

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Ref: L/35/A

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volvement in public telephony systems and digitul networks. Of course particular hardware exposure is loss relevant than the upplications knowledge but familiarity with PDF 11. VAX 11/780 or Intel 8085/ will be a distinct advantage. Successful candidates will be paid an excellent relocation package in addition to an above-

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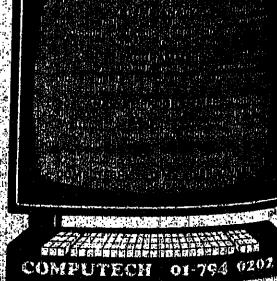
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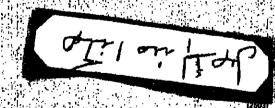
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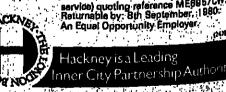
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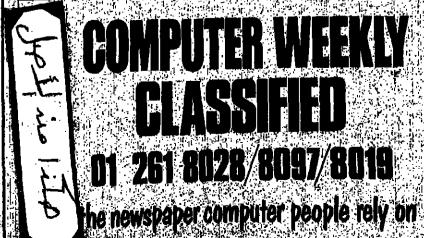
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must not lock himself be-While the features were, hind a desk as a perpetual biggest response was to activity to the issuing of

the advertisement aimed at educts and memoranda sidesmen aspiring to enter rather than getting out into the street and finding out Most senior salesmen, what the hell's going on. when asked "What will be • One of the loys. With the the next stage in your car- boys yes; but not one of

not, this response comes objectives, he must be able over as a reflex action of to manage without rushing someone wishing to say the back to his boss for help right thing" as opposed to every five minutes.
the revelation of a well • Status. He should not considered sales strategy. worry too much about The transition from whether the decor of his

TRADER

automatically initiates a divine power upon the individual, giving him the skills and, qualities necessary for success.

Why do so many salesmen fall to survive this change of role? Probably it is because they do not users, the seminar will give practical information on hard appreciate the difference between being a sales manager and being a sales man.

What are the functions of sales manager manager which the canadian Pacific Hotel, Frank-What are the functions of
a sales manager which
make him so radically different from a salesman?
What are the things he
should be doing?

Direction, Establishing Direction, Establishing the final seminar will be new including London at the Cumberland Hotel. Further details can be obtained from Frost and Sult

ment. concerned with the current and ment. Strategy. Using entre- future use of packaged soft ware it will be held at the Hyatt control, applications of soft-ware in the banking, inburance

There are of course some the Moyflet Ishorell, Belt I things he should not be involved with!

Supersalesman. He obtained from SEAS HQ, Toernoolvold, not be rushing The Netherlands.

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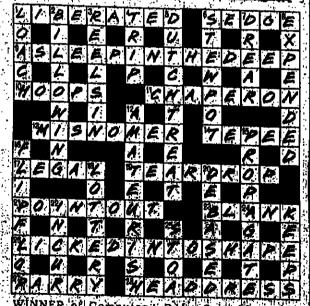
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CW Prize Crossword No 7



Winner of Computer Friday September 12 The Weekly's Prize Crossword winners, hames will be humber 7 is Mr. H. M. published on September Latham of Victoria 25.

Crescent Rond, Glasgow who wins 110.

Two runhers in are Mr. R. Harrigan of Woodlands 8 6 0.

Grave Caversham Books

Grove, Caversham, Books and Mr D. M. King of Childect Hill Coventry, They both will be getting

Crossword Number 8 will be published on September, 4. Entries should be received at CW's Long don office by first post on the

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CONTRACT PROGRAMMER

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regrammer with CORAL 88 expetience regulited to volk linded 85 (15) AT LIT or ALCOL will be capalified to this is a skirnboun blue contract to start and of Sepender Algebra context pepting Jones. Computer 5 Mint Walts Coopdon 01-680 3761 scrvices

BOX Nos

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Plause contact Daubite folier

Virginia start for mini assembler programmers -

One of the world's top ten professional services groups, with over 200 offices in more than 40 countries, has recently launched a major expansion in the U.K. The American organisation is involved in many varied computer based projects, including energy analysis, software development, micrographics, communications, transportation, urban planning, military, aviation and marine developments and property information services.

The U.K. expansion will cover many of these areas but an immediate need is to establish here an on-line information service for use by estate agents. The system well-proven and very successful in the U.S.A. is based upon Hewlett-Packard 1000 mini computers capable of handling up to 300 terminals via telephone links. A team is being established to the West of London, near the Thames and immediately 3 Assembler Programmers with 3-5 years experience of working on mini-based communication systems are required to adapt the systems to U.K. requirements. Experience of Assembler for HP minis is not essential but competence in re-entrant coding is.

to £10,000

Initially, it will be necessary for them to spend up to 6 months with the organisation in Virginia to aquire the expertise, with all expenses paid and visas provided.

The team is to be housed, with other key parts of the group, in modern, convenient offices. The environment is dynamic and exciting with many other interesting developments under way - a most exhilarating group to work and grow with.

Our client's requirements are urgent, so please telephone to discuss fully, prior to arranging an initial meeting for those with suitable experience.

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JBA

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These are genuine consultancy opportunities offering well above average benefits within a first class organisation.

Contact: Boy Stevens

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Applicants should have a professional outlook and a sound computing background with a successful sales record preferably involving packages.
Previous experience of number sales HP hardware and the manufacturing distribution sectors is desirable but not essential.

Contact: Ber Stereb

Senior Analyst **Financial Systems**

Our ollent is an engineering prespisation forming part of an international group. Current plans involve comprehensive new systems development for the little claim and accounting functions and a Senior Systems Analyst is now

being sought.
Applicants should have at least 5 years computing experience with emphesis.
Applicants should have at least 5 years computing systems. A knowledge of a
for the design and development of accounting systems. A knowledge of a
medium-sized IBM main frame environment would be an advantage but this
medium-sized IBM main frame environment would be an advantage but this
medium-sized IBM main frame environment.

Control Bay Stateman
applications "know how" is much more important.

North Birmingham

This temputer services division of a large and well known international engineering group have soldieved a high level of computerisation over past years. They have recently embarked on a phase of development aimed at fully utilizing current dp practices and technology in order to maintain an effective service. Vacancies exist for:

Systems Development Manager

Applicants should ideally be holding a similar position but those having several years experience at a senior systems level, coupled with preferably past programming involvement, and essentially current responsibility for many management, will receive serious consideration.

Systems Project Leader c. 27,500
At least 8 years systems analysts experience with a blas towards the financial areas and the ability to accept fully project leader responsibilities are a main

Systems Programmer

A vacancy exists in the technical support section for a systems programmen Applicants should have 2 years experience with communications involve-ment, findlers by but not essentially gained in a Univac series 90 OS3

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